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Mac ADDICT

27

NOV/98

75 Great Mac Puns & 26 Stupid Ones

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8 Easy Steps to Creating Cool Videos

BACK IN THE BLACK

40 REASONS APPLE IS READY TO ROCK!

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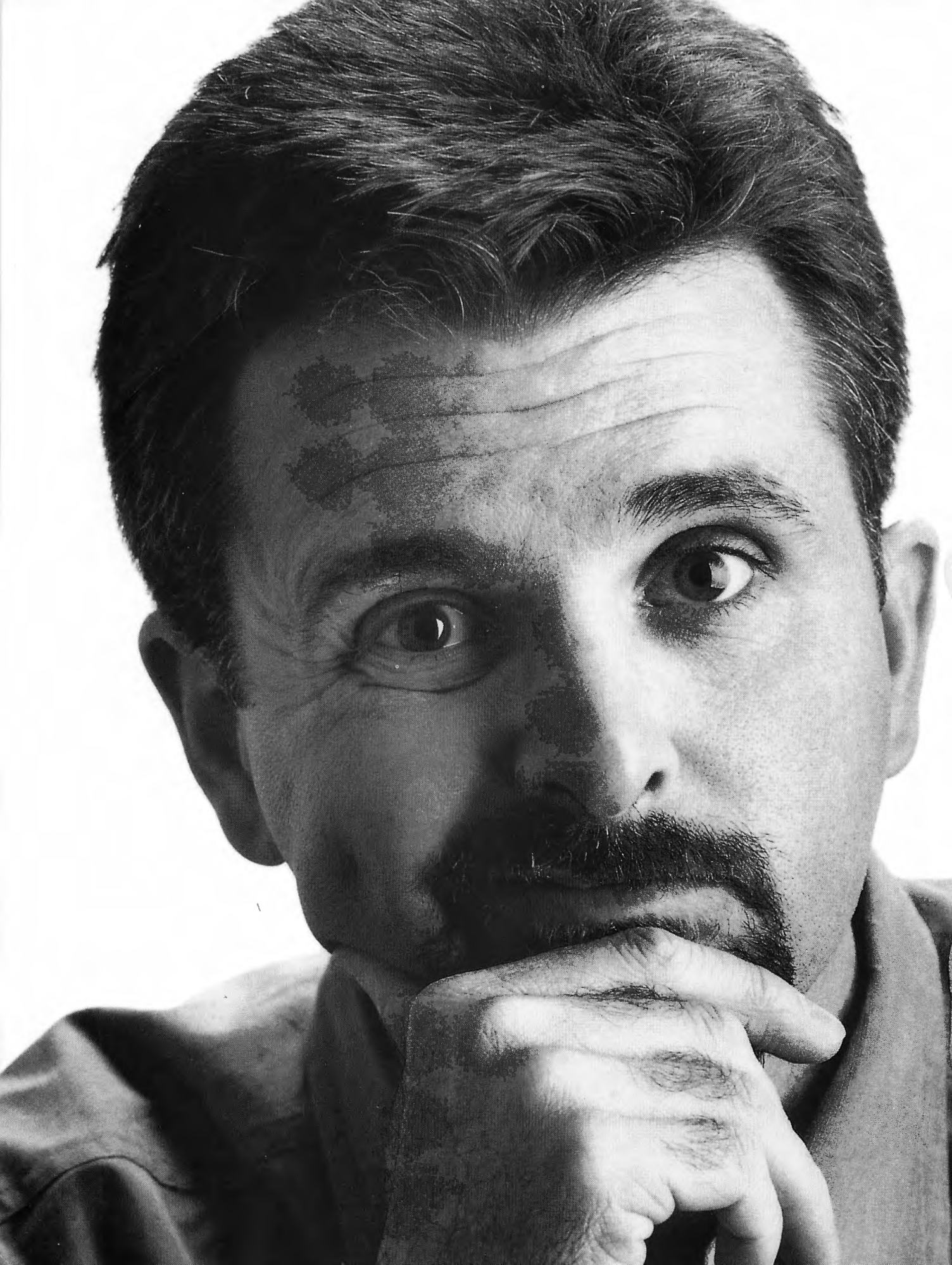
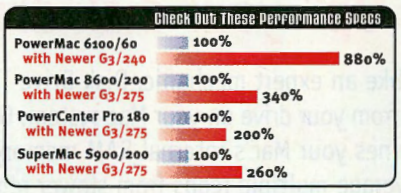


"I'm sick of having to settle for a slower Mac just because my budget sucks."

Sometimes Newer Is Smarter Than New.

In a perfect world, we all would buy a new, top-of-the-line Mac right now. Of course, there's that little thing called money, the stuff most of us don't have coming out of our ears. That's why you need a Newer Technology MAXpowr G3 processor upgrade card. They're easy to install and save you thousands of dollars compared to buying a whole new system.



Newer Technology makes processor upgrade cards for almost every Power Mac and are adding more machines to the list with faster processor speeds as you read this. With a MAXpowr G3 card, you'll have a faster processor with a much faster cache. In fact, the MAXpowr G3 card can make your old Mac one of the fastest desktop computers available even compared to Apple's new screaming G3 machines. Thanks to Newer Technology, your older, slower Power Mac has new life which makes waiting for a brand new machine a lot less painful.

newertechnology inc

To find out how to make your old Mac newer visit www.newertech.com or call 1-316-943-0222

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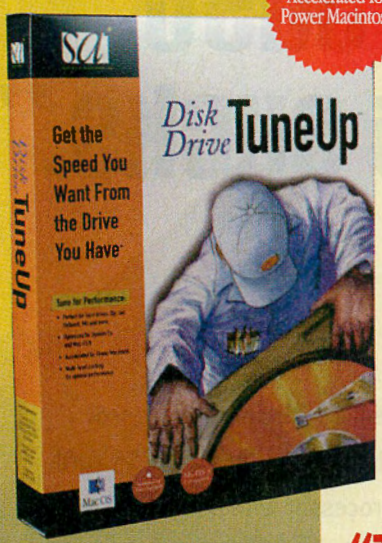

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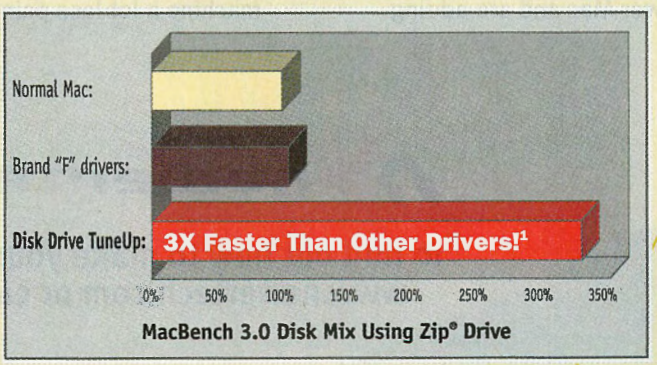

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1 Ziff Davis, MacBench® 3.0 scores using as Iomega® Zip® drive on an Apple Macintosh Performa 6400/180 running Mac OS 8.0 with 24 MB RAM and VM on. All products used in this test were shipping versions available to the general public. This test and its results were not verified by Ziff-Davis. Individual gains depend on the type of media used, caching parameters established and system specifics.

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NOVEMBER 1998

MacADDICT 27

BEARS AND CORN DOGS baking in the sun, Apple is, Apple is number one!

highlights

32 Back in Black

It's been a long time coming. Sales are up, profits are rolling in, and some of the coolest Mac products ever have hit the market. We bring you 40 reasons for Apple's recent success.

BY NIKKI ECHLER

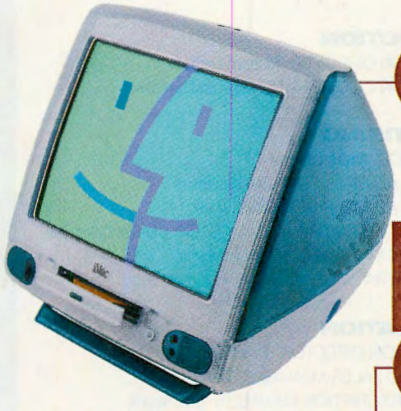
42 This Old Mac

Boohoo—it's the last installment of our ever-popular series. This time we show you how to get the most out of your old all-in-one Macintosh. **BY T. KELLEY BOYLAN**

46 iMac: Inside and Out

It's the hottest thing to hit the computer industry since the original Mac. So naturally we tore it apart and put it back together again to find out just what makes it so gosh-darned cool.

BY OWEN W. LINZMAYER



PRETTY ON THE OUTSIDE, and, like Courtney, on the inside too!

how to

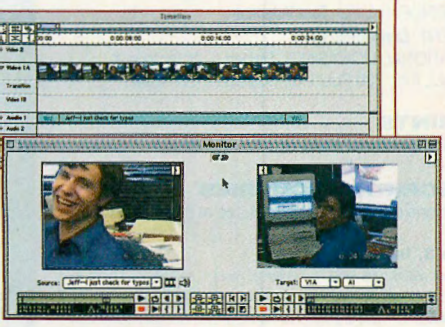
84 How to Premiere Your Videos

Break out the camcorder and put on your best Spielberg persona—you're about to try your hand at video production using nothing but your AV Mac, a camcorder, video software, and your deepest, darkest imagination. Step by step, we show you how to edit your own video.

BY ROBERT CAPPS

88 How to Auto Upload with AppleScript

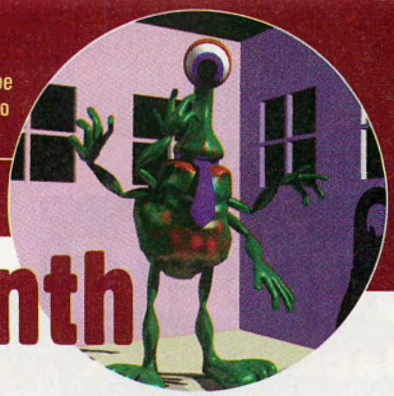
Everyone says AppleScript is useful, but who really knows how to do something useful with it? Well, you will, after you follow our eight-step how-to. In fact, if you maintain a Web site, you'll find this information so valuable you'll be willing to lay down your life for it. You're welcome. **BY ROBERT CAPPS AND MARK SIMMONS**



MOVE OVER LEONARDO, hop away, thanks. Jeff's the Mac addict's matinee idol.

Let loose from the noose. We salute you.

THE MAN WITH THE PLAN breaks it down for the folks at home. See Get Info, p 20.



IN THE MORNING he'll be *drunk and* ugly, thanks to LightWave.

every month

12 Editor's Note
Why the iMac is successful. Surprise—it's not the hardware.

14 Letters
A home-built nitro-burning funny Mac? Now this you have to read about.

20 Get Info
Jobs opens up at Seybold, spilling a few of the beans about Mac OS 8.5 and Mac OS X. Plus, a brand-new *MacAddict Index.*

28 Cravings
These things are so cool, you won't care how much they cost. Or maybe you will, but you'll quickly forget.

54 Reviews
Fourteen Mac products landed on our doorstep, so we figured we'd play around with them and see what worked—and what didn't. The exclusive list includes QX-Tools 4.0, Kai's Power Show, RAM Doubler 8, and WebPainter 3. Trust us.

82 PowerPlay
Myth 1.3 debuts, with a whole new collection of maps and games. Plus, we look at Douglas Coupland's book about Lara Croft—creepy as it sounds—and give you some Unreal cheats to make your gaming experience complete.

92 Ask Us
There's no question we can't answer—we just choose to skip the really hard ones. Find out what font Apple uses in its print ads, where software goes when it's installed, and whether MacBinary or BinHex is the way to download.

120 Shut Down
It's true—this page exceeds the FDA's recommended daily allowance of chortles. You will, however, have to continue to take vitamin C supplements.

BEANIE BABIES GOT NO FINGERS, so they ain't frettin'.

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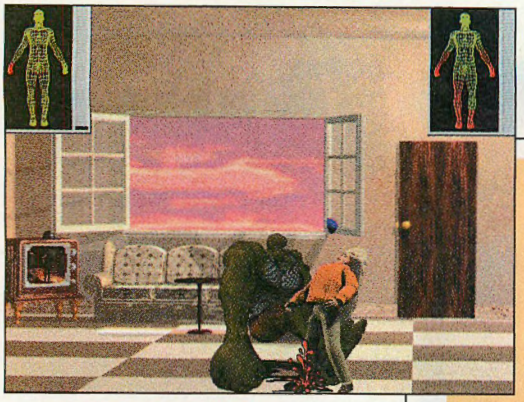
the disc



THAT'S GOTTA HURT!

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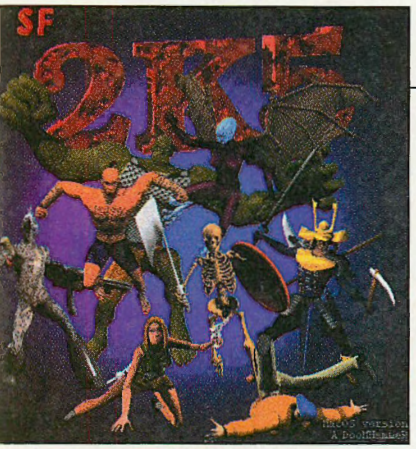
2K5 Demo

POW! KABOOM! SPLAT! CRASH! ZLORP! All right, tough guys and gals, here's a game that'll knock you out—literally. Go head to head with your opponent as you try to smack, kick, sock, and clobber your way to victory. It's rock 'em, sock 'em action with a kung-fu grip. Blood and gore included.



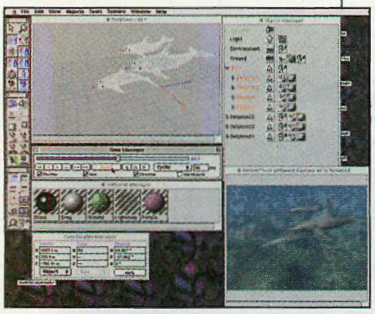
HEY, MOM, meet my friends...

Cinema 4D XL Demo

Life in the virtual world...at least that's what Hollywood's banking on to sell tickets these days. If big-screen CGI and special effects dazzle and amaze you, fire up this 3D production program and let the creative juices flow. This integrated 3D modeling, rendering, and animation software package allows you to create workstation-quality graphics in no time at all. This demo includes the entire package of tools and features, so creation is limitless. However, it is save disabled and renders with a watermark.

Safecracker Demo

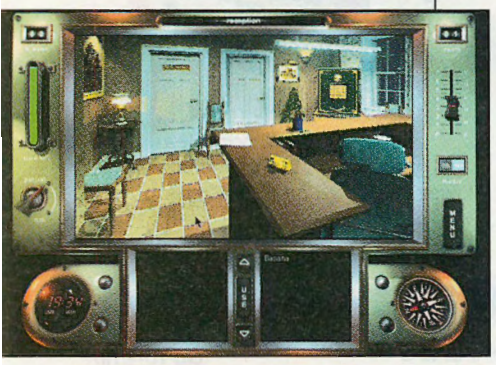
For the hacker in all of us. This first-person perspective, puzzle-solving, adventure game utilizes QuickTime VR for total exploration and mobility in a 3D environment. The scenario: You've been offered the job of your dreams—as security development chief—but your prospective and eccentric boss wants to test you first. It's up to you to break into the boss's mansion, locate the master safe, and hack into it. But where is the master safe?



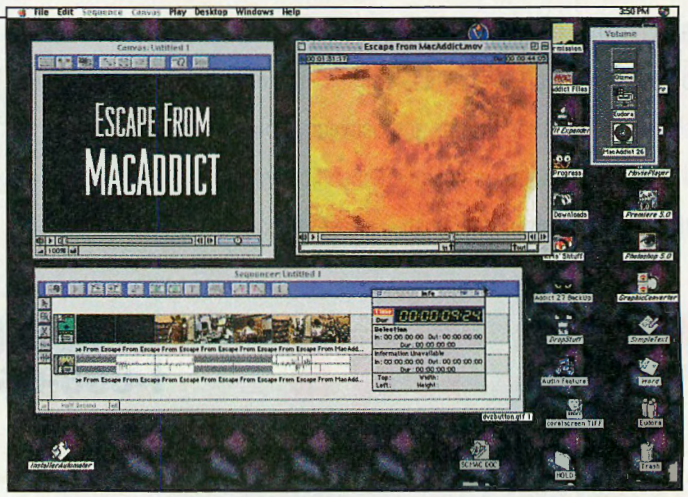
CREATE WIREFRAMES, ADD TEXTURES, render with a light source, and voilà—Flipper!

VideoShop 3.0

Don't say we've never given you something for nothing. We have the *complete* Strata VideoShop 3.0 package—we're talking the whole enchilada—on this month's disc. Make your own movies with this full-featured video editor—just in time for the holidays. Create scrolling titles (put your name in lights), add music to all those tense family scenes, or edit Granny's long-winded speech on making the perfect fruitcake. That's a wrap!



YOU SPIN ME RIGHT ROUND, baby, right round, in this demo, baby...



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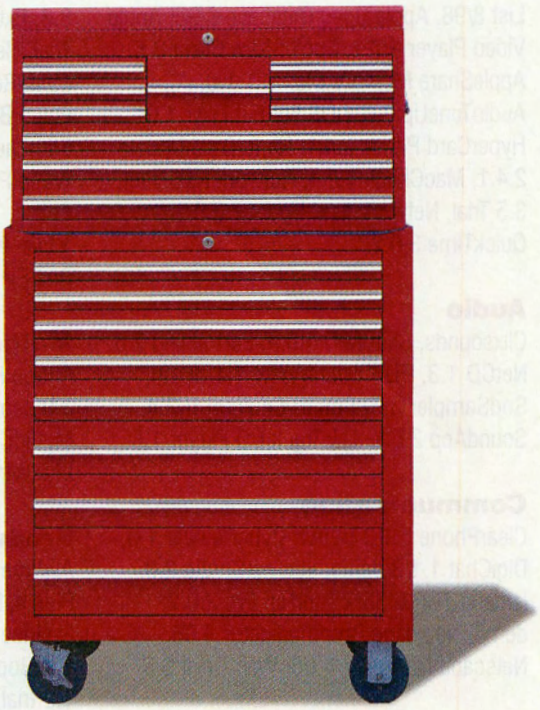

When your Macintosh computer is not operating correctly, having the right tool to find and fix the problem is important. And as any technician will tell you, you can never have too many tools. TechTool Pro 2 checks more aspects of your Macintosh than any other utility available. Besides repairing and recovering damaged drives (including those with the new HFS+ format), you can also test all those other critical parts of your system that our famous competitor ignores like RAM, CPU, floppy drives, scanners, modems, Internet connections, CD-ROM drives and much, much more.

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The Kitchen Sink
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Myth II: Soulblighter, sequel to 1997's Game of the Year, Myth: The Fallen Lords, is a game of epic fantasy battle set in a fully 3D world. Players manage troops, from handfuls to hundreds, in fast and bloody combat, using swords, explosives, and magic in the struggle against Soulblighter's undead legions. Smoother graphics, streamlined controls, and new features such as 3D fire, fortifications, and indoor environments. Features free cross-platform multiplayer games over the Internet! Myth II: Soulblighter will ship in 1998 for Windows 95 and 98, Mac OS computers.

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In Gridz, you lead an army of ToolBots composed of Workers, Strikers, and Hackers. The enemy ToolBots have taken over NetSpace and you must take it back grid by grid. Build your force of ToolBots and assign duties for each to get through levels and capture the enemy. Learn more about Gridz and other products on the Green Dragon Web site.

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Classroom Publisher is a desktop publishing program designed with schools, teachers, and students in mind. It allows anyone to quickly and easily create calendars, clip art, greeting cards, and all kinds of reports, banners, and stationery without even picking up a manual! It was written in the world's fastest Basic compiler—FutureBASIC, also sold by Staz Software. See the Sponsors section on The Disc for more information.

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Play the most realistic pool game ever! Experience the exhilaration of lining up just the right shot. Feel how the mouse moves just like a real pool cue. Size up your opponent in the Player Selection screen. Chat with other players over the Internet. It's not just the incredible photo-realistic graphics; everything about RealPool is more realistic—the feel of the game, the physics, the trick shots, and more!

Village Tronic—Picasso 540 3D card demo
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Did you ever work with a video card in your Mac that was able to:
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CE Software—QuicKeys
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QuicKeys is a personal automation utility that reduces time spent on the Macintosh by automating routinely performed, multistep operations on demand in every application. QuicKeys extends the functionality of the Mac OS, providing an automation toolbox across the entire computing environment, all without having to learn scripting languages or programming.

the web

highlights

Goodbye, Hello

After more than two years of faithful service on the digital version of *MacAddict,* our very own online editor is moving on to bigger and better things. He has been promoted to senior technology editor, and, as such, will be coming up with all kinds of great Mac goodies for the print pages, the CD-ROM, and the Web site.

YES, IT'S THE SAME WEB SITE full of digital goodness.

In the meantime, *MacAddict* will maintain its current Web presence, while simultaneously working on some nifty new online stuff to be revealed in the near future. Stay tuned to http://www.macaddict.com for new information, and enjoy the fruits of Mark Simmons's labor as he embraces his new role in our mad laboratory of Mac stuff!

MacAddict NETWORK

www.macaddictnetwork.com

http://www.nobeige.com
New! NoBeige.com brings you all the latest iMac news, plus message boards, a USB peripherals database, and an availability tracker.

http://www.macledge.com
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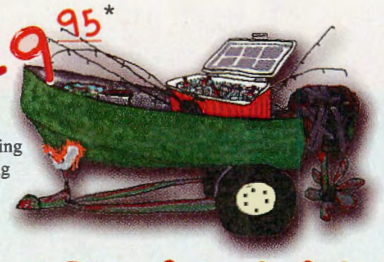

REDNECK** PUBLISHER

I've learned to deal with those stuck-up waiters in high falootin' restaurants. I've even gotten to where I don't make slurping sounds when I suck the soup out of my bowl. Experience has also taught me not to chew tobacco at big city social gatherings because they usually don't have any (good) place to spit.

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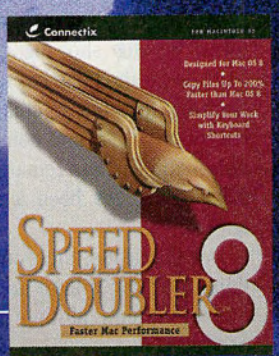

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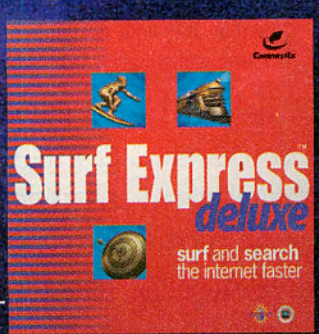

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editor's note

Enough about the iMac already, you say? Not quite yet.

The iMac is here, and so far all signs indicate that it's a resounding success. Since I'm writing this long before you'll read it, it is possible that between now and then something bad and unforeseen may happen, such as a red-hot meteorite crashing through the roof of the iMac's build-to-order factory in California. But I seriously doubt it.

No, in the early days of the all-in-one iMac, record numbers of buyers are snapping up the plucky little computer that could. Purchasers include a lot of first-time computer buyers and Windows-based PC users who "think different" enough to try something new. And that, after all, is one of the iMac's primary reasons for being—to expand the Mac platform. Besides showing great sales numbers, so far the iMac has met demand—an amazing feat for a computer that took barely a year from concept to production—and has had remarkably few technical glitches. It's been a rousing product launch.

All that aside, there are two reasons I think the iMac will go down on record as one of Apple's all-time most successful products.

First: The iMac is visceral

After a midsummer interview with Jonathan Ive, lead designer of the iMac, it became startlingly clear why the Bondi Bomber was going to succeed: The design targets the kid in all of us. It doesn't take any jargon at all to "get" the iMac, no discussions of bus speed or backside cache ratios. The iMac appeals at a level much more basic than high-level technical specs. While the machine has great guts (fast, well integrated, and compact), it's the design that matters. The iMac's form, colors, and look all aim lower in the cerebral cortex, at the part of the brain that processes touch and sight. It doesn't take much to get warm fuzzies when dealing with one. Try *that* with a PC. Go the Bill and Ted route with this. Use your time machine to travel back and pick up a few Greek citizens from, say, the time of Socrates. Bring them to the present and show them two computers—a G3 233MHz desktop and an iMac, each with identical software. At this point, the numbers behind these Macs aren't going to mean a whole lot, but the design will. I bet that each and every Greek citizen from the past would prefer the iMac. The first person who performs this experiment and gets different results wins a free subscription. We'll need proof, of course.

While the [iMac] has great guts...it's the design that matters. The iMac's form, colors, and look all aim lower in the cerebral cortex, at the part of the brain that processes touch and sight.

Second: The public gets the iMac

This is anecdotal, so it hardly counts as evidence in a larger sense, but I'll relate it anyway. The day before the iMac's launch, a couple of friends invited us over to dinner. Over the meal, they asked me whether I'd heard of this new iMac thing and what I thought about it. Now, these folks knew that I worked for a technology magazine of some kind, but they didn't know that it had to do with computers, much less the Mac. Their situation? Their current computer, one in which they invested very little, is a used Mac SE that someone gave them. With the whole wide world of computers before them—and never having bought a new computer—they wanted an iMac. I had a very good dinner that night, and it wasn't just the excellent cooking that did the trick.—*David Reynolds*

They Beg to Differ

In our September issue, we reviewed the PowerBook G3 Series 233 with the 12.1-inch display. We gave it a "Yeah, Whatever" rating based primarily on its passive-matrix display. We received a couple of responses from people who are happy with said PowerBook and those who wouldn't mind having one, if one were to mysteriously make its way into their hands. Here are two excerpts to give you an idea of what those who love their low-end 'Books are saying.

The first is from a current G3 Series 233 owner:

"I've had [a PowerBook G3 Series 233] for almost a month and a half now. I bought it because I have limited funds and will be going to college next month. I am only 18....Your biggest gripe was with the screen. You complained that the mouse blinked out and that the crispness isn't that great. Hello? It's a passive-matrix display! It's not perfect! However, I use it every day and have no complaints with it. I watch my QuickTime movies with no problem, I work in Adobe Photoshop with ease, and I am still playing my favorite games on this monitor: Myth and StarFleet Academy. These both play great, and the visuals don't suffer at all. I think you need to reevaluate your opinion on this particular model. It is the *perfect* laptop computer for those (like me) who are economically limited."—Rick Arnold

The second is from someone who wouldn't complain if one landed in his lap somehow:

"I just wanted to say I totally agree with your review of the PowerBook G3 Series 233 in the September issue. It is a huge piece of crap. Apple should be ashamed. As such, please send your review model directly to me."
—Ryan Junk

Fair enough. Unfortunately, Ryan, Apple wanted it back, too.

HOW'S YOUR SEARCH FOR MAC ACCESSORIES GOING?

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Hey, we know the places you can buy Macs and Mac stuff aren't exactly popping up like Starbucks these days. But we've got you covered. With high performance accessories like our TurboMouse® and Orbit™ trackballs, easy-to-use Mouse-in-a-Box®, and 2- and 4-button mice. And now there's our hot new Keyboard-in-a-Box™. You see, we've been making Apple products since 1981. And we're going to keep right on making them, until the Feds shut down Microsoft and Apple regains its rightful place as the king, the sovereign monarch, the mighty potentate of the cyberuniverse. Until then, check out the Maccessories® at www.kensington.com.

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letters

Here's to the crazy ones, the ones pursued by people in white jackets.

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GET ON, GET ACTIVE. Talk to us and to other Mac addicts at the Web site.

Funny Macs Live

Having reread your article ("Nitro-Burning Funny Macs," Mar/98, p28), I set out to re-create your LC475 "Charger." I started with an LCII. My wife, a teacher, loves the small desktop footprint of the pizza-box design. However, she wasn't amused by the 10MB of RAM, the slow 68020, or the pathetic 40MB hard drive. "Fix it!" she says.

■ **Step 1**—Contacted the fine folks at MicroMac and bought their LC475-66/33, full 68040 board. Swap the boards, and I've got an instant LC475, only with a 16MHz edge in speed *and* an FPU.

■ **Step 2**—The hard part! Contacted Gary Dailey at Gary Dailey Technology Services, and begged, pleaded, and waved money for a DayStar PowerCard 601. Well, it took a while, but Dailey came through *big time!* The PowerCard kit he sent me had everything I needed to turn my new board into a two-headed monster. Now the luxury of 68040 66MHz or 601 66MHz processing was *mine!* (Okay, okay, my wife's.)

■ **Step 3**—Called Mohawk Memory and obtained two Viking 512K VRAM modules, for a full 1MB of video RAM, and a 32MB SIMM, for 36MB of total RAM. (RAM Doubler was to follow shortly.)

■ **Step 4**—This is where I cheated. As I just couldn't bring myself to put in a 4.55GB Barracuda, I scrounged through my leftovers bin and found a nice, quick Quantum 540MB Fireball. Only 5400 RPMs, but faster than a stock 4500 item. Also, I figured if my wife could limp along on an 68040 all this time, a 540 would be plenty. As it turns out, she only managed to put about 350MB of goodies on it, so I'm still ahead! Before installing it, I prepped the drive by putting the Universal Install of OS 8.1 on it, through my P6116 CD.

■ **Step 5**—There wasn't supposed to be a step 5, but I ran into trouble getting the 601 recognized. Seems the Control Panel 601 Processor Upgrade didn't like the odd Gestalt number the accelerated LC475 board returned (90). So, having been there and done that, I went to the "Low End Mac" Web site and grabbed a spiffy piece of software called Wish I Were by a genius named Martin Blitz. Install it and lie like hell to the OS: "Hi. I'm really a Performa 630 with a 601 upgrade!" Works like a charm! The beast fires up in 601 mode, and away we go!

P.S. While your "Charger" has an edge in storage and HD speed, I gotcha with the processors. And since I left the LCII cover alone, it is, in the parlance of 1960s-type hot-rodders, a real sleeper. Thanks for the inspiring article. —Gary Depp

That's Mr. MacGyver to You

When I went from my PowerBook 3400/200 to a PowerBook G3/250, one thing I missed was the pop-down rear feet. So I went to the hardware store, to the section that sells furniture coasters and bumpers. I found some hard-rubber, crystal-clear bumpers that were self adhesive and placed one next to each back foot of my PowerBook G3. While they do not fold away like the PowerBook 3400's feet, they are quite unobtrusive, and they put the keyboard at a better typing angle—they raise the back up about a half inch. They also improve air circulation under the 'Book, and they make lifting it off a hard surface much easier—you can get your fingers firmly under the machine before lifting. While I would prefer the built-in ones, this was an inexpensive substitute, and the clear rubber goes nicely with the crystal Apple logo.—E. John Swift

She Drinks Gin

So this is what it looks like inside *MacAddict.* Oh, I wanted *MacAddict* to be my friend, so Nikki, your case of whiskey is in the mail. Uh. Yeah.—Joe Robbins

You'll Ruin Your Eyes

I recently installed a black-light tube in my room, and I thought that was pretty neat. But then my eyes found the *MacAddict* lying on the desk and I was in bliss. I think this must be another of those conspiracy things where we're not supposed to know that the *MacAddict* covers look awesome in a black light. *Whoa!* Revelation! I think I'm gonna reread all of the issues in black light! Gotta go....—Jeremy Kemp

Laugh It Off

I just got your September '98 issue and was surprised to see someone had sent in an excerpt from the *Microsloth Joke Book* (where were you supposed to go today?). It is a funny book, and I think you should give credit to the correct person, who is David Pogue. He wrote *Hard Drive, The Great Macintosh Easter Egg Hunt,* and *Tales*

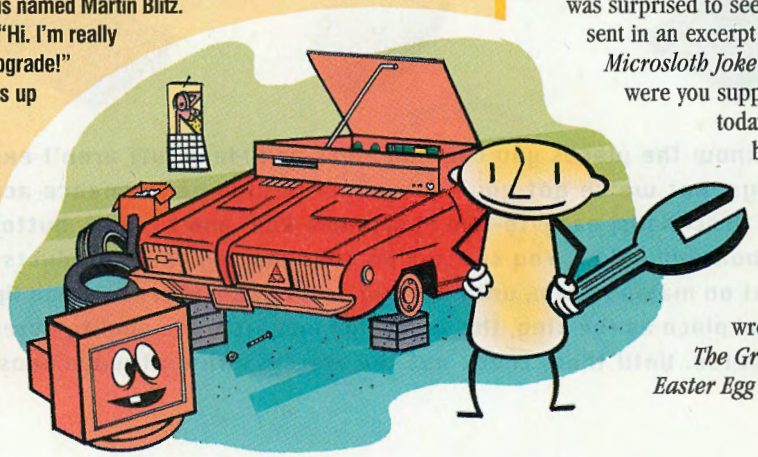

Illustration by Mike Gorman

from the Tech Line. They are all hilarious books and I suggest them to any Mac fans.—RYAN JOHN POWERS

SHE'S STICKY, TOO

"Icky Nikki Echler"?!?!!! Hee, hee, sniggle. Ho ho hee wa-hahaha *snort* haha!!! Sniff. Sorry, Miss Echler.—RICH GANDER

HE HAS HOMEWORK

Can Max come over and play?—SUSAN ANNE FRANK

YOU SOUND ANGRY, LIKE A STARTLED RHINO READY TO CHARGE

What's with the analogies in your September issue? A few examples:

"Buying a computer monitor used to be a lot like getting underwear for Christmas—necessary, but hardly a list-topper."—page 44

"...the cursor still submarines as if on NATO maneuvers."—page 46

"Whenever a CD is in the drive, it vibrates and hums like the magic fingers bed in a Motel 6."—page 46

"Benchmarking the ix3D on our 266MHz G3 was like road-testing a mid-'80s Jaguar XK—silky smooth."—page 50

My personal favorite—"Apple came late to the Internet party, but fortunately the kegs hadn't yet gone dry."—page 34

All I want to know is this: Who on your staff has ever been on a NATO submarine? Who's been using the magic fingers bed in Motel 6? *And who's test-driven a Jaguar XK?* Oh, and can I be invited to the next Internet party? It sounds cool. Please be more careful with your literary devices in the future. Literary devices are not toys.—NICK HOWARD

THE MOVIE VERSION IS WORSE

In Borders Books yesterday, there was a big honkin' book titled something like *Windows NT Server Applications Manual.* The bookshelf was titled New Fiction. 'Nuff said!—LEE DARROW

WE SAY THEE NAY

I'm new to Macintosh. Do you guys pronounce "the" as "thee" or "thuh?" Just curious.—BENJAMIN "NO MIDDLE NAME" POLLACK

We're glad you asked. We say "thee" when we're in a particularly Shakespearean mood, which often happens after our weekly reenactment of King Lear. *However, if we've just done a Tennessee Williams play, we say "thuh." You see, it all depends on timing.—DR*

DOWN TO THE STUD

Where *have* all the cowboys gone?—MARK NORMAN

OR READING FOUR PAGES OF READER LETTERS

I was in a certain computer superstore last week and saw Windows 95 running on a G3 Mac. It was like watching the Beatles play an Oasis song.—STEVE BRODERSON

TAKE A BITE OUTTA THIS

OK, I have this problem. I recently licked a *MacAddict* CD. I decided it tasted pretty good, so I licked another. It also tasted good. I figured if the CDs taste this good, I'd try a 32MB EDO DIMM. But they have no flavoring and they don't work as smoothly when you put them back. I went back to CDs. One thing led to another. I began eating CDs. Then I began eating your magazine. I was about to take a big bite out of September's issue when I realized I needed help. Should I be pointed out and laughed at? Is it normal to have nightmares about giant CDs coming to eat me? Am I reacting to using a PC for a day? Please rehabilitate me by sending a 300MHz G3.—M.C. GROSS

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Lining the Cages?

My hamsters wanted to say hello! They are very popular on the Internet, and they are fans of your magazine.—R. Zimmerman

Check's in the Mail

Ha ha! I've finally done it. I've subverted a PC user! He began using the 128K Mac and then converted to PC. Ugh! The pain! The agony! You don't know what it was like watching my best friend use a PC. A few weeks ago, I told him about the upcoming iMac. He wasn't terribly impressed; he just thought it was kind of cool. But now! Five minutes ago he told me that he wants to trade in his PC for a Mac! Better yet, an iMac! Oh, joy! Oh, rapture! Now we just need to win the lottery so we can go and buy a couple of iMacs, and G3 PowerBooks, and G3 workstations, and...—Brad "the Mac addict" Harrison, Michael "the subverted PC user who now wants an iMac" Werden.

You Know You're a MacAddict When...

...the only thing you'll buy out of the vending machine at work is in the slot marked G3 (which, by the way, is a roll of Lifesaver mints).—Terry Smith

...your Snood score defines your social status.

...you teach your preschool students what kind of sound a dogcow makes (true story)!

...you have a shelf in your room dedicated to back issues of Mac magazines, all the way back to 1985, because they "might be worth something someday."

...you have a collection of T-shirts for discontinued Apple programs and technologies, because they "might be worth something someday."
—Lucas Steuber

...you plan your only vacation of the year around the iMac's launch.

...you go to buy a new car, only to find that none of them comes in Bondi blue.—Doug McCloud

Rob Still Doesn't Want to Hear about NT

"Empty Promises" (Sep/98, p22) is probably the most even-handed, objective, and useful article I've read about the Mac versus other platforms, and I've read a lot over the years. The format of comparing real concerns with real Mac advantages was excellent! In objectively supporting two platforms—Mac (my personal favorite) and Windows (the university's majority platform)—I like to have info such as this when I get uninformed comments about the Mac. And getting this from *MacAddict* is something of a surprise. I always enjoy reading each issue because of the numerous tips and lighthearted style. This is serious (quality) stuff! My suggestion: Do this for other areas such as education, music, scientific research, and so forth. We may not win in all those areas, but at least we and Apple will know why.—John David

We Must Be Crazy

How do you do it? I have been trying to get my father to listen to me about the joys of Macs for several years. (He has been a strong IBM supporter!) The other day he came to visit me and when I walked into the living room, he was sitting on the couch reading *MacAddict*. He looked up at me and said, "Maybe I should get a G3." I give up! You are gods!—Nate Swenson

Fight the Power

Hey, I just thought you might like to know that even at work I attempt to emulate my Mac on the piece of junk Wintel machine I have to work on. I have moved all the icons to the right side of the screen, put the Start menu at the top of the screen, renamed "My Computer" "Macintosh HD," and put a large picture of the iMac on the desktop. I have also made the screen saver display a giant Apple logo. I am slowly converting the whole office.—Mike Fey

Is That the Windows 99 Release Date?

The end of the world is August 28, 1999.
—T.J. Abell

Pretty Lady...

Nikki—are you single? 'Cause you have to be the most attractive woman I have ever seen with such a passion for Macs.
—Eric Dolecki

At Least It's Not Antifreeze

I bought some juice called Hi-C Blue Cooler. The color is almost exactly Bondi blue. I was proud, walking around sipping my iMac fluid. Then I realized that it was missing something, so I added ice.
—Neal Te Paske

It's Bernadette Peters

Okay, you *have* to help me out here. Maybe it's just Richard Dreyfuss withdrawal, maybe it's just watching that little download bar creep ever so slowly as I download the Apple ads, but *where do I know that new voice from?* I'm thinking Jeff Goldblum, but there's something else, something so familiar, that I know I must be missing something, something painfully obvious. (Like the iMac at my local CompUSA, which had the keyboard cord squished painfully in the hinge of the bay door, rather than elegantly slipped through the helpful hole Apple provided. Duh!) Who is it? Can you find out for me? If you tell me, will I whack myself repeatedly for not knowing? Will I make myself install Windows 98 on Virtual PC as penance? Please, help me out here!—Justin Reese

Poets Among Us

Since our readers are such a sub-verse-ive bunch (send complaint letters to our pun complaints department), we've decided to publish some of our favorite Mac poems and songs that have been sent to us recently.

Ode to OS 8

—Attributed to DaFedz (dafedz@usa.net)

OS 8, OS 8,
Oh my gosh, you are so great!
You're much greater than I am,
You take up 20 megs of RAM!
Multitasking is a smash,
Like when I'm emptying the Trash,
And I'm going to the john,
The Trash still takes three times as long.

OS 8, OS 8,
I will not procrastinate.
I will cherish you with love,
Even though I want to shove
My OS 7.6 CD
Into my drive immediately,
And perform a clean install,
Then chuck you at the wall!

Oh my goodness, what is this?
OS 8.1 update disk!
Maybe this thing is the key
To increasing your efficiency!
I will download it from MacLine,
When it's done, then it will be mine.
I will upgrade you and pray

We move the information that moves your world.™

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"We serve *Toast* to *EVERYBODY*,
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For serious soundsmiths, Jam's high-end audio applications create professional quality CDs. Jam works with or without a sound card to give industry-standard "Red Book" quality recording. Advanced features like PQ subcode editing, cross fades and BIAS Peak LE™ make Jam ideal for musicians, sound engineers and professional sound designers.

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visit www.adaptec.com/easycd/mac

That your glitches go away.

There we go, it is done,
You are now OS 8.1!
Boy, oh boy, I'm so excited!
I even think that I've decided
Not to clean install
OS 7.6 after all!
Now it's time for me to see
If you can

Sorry, a system error has occurred.
( ) Error ID: Unimplemented trap (Restart)

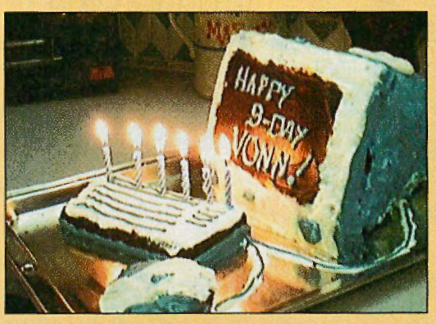
(Sung to tune of "If I Had a Hammer")
If I had a Power Maaac,
I'd have 8.1.
I'd use HFS+
To reformat my hard drive
I'd use CMMs
I'd play Myyyyth
I'd accccelerate all my stuff
'cause I caaaan!
If I had OS 8,
I'd pop up some wiiindows.
I'd click and a half
All over my desktop.
I'd view as buttons.
I'd use Win-dow Shade.
I'd use crayon picker and Option-click
All over my deeeesktop,
Yeaaaahh.

(Sung to "Food, Glorious Food" from the musical Oliver*)*
Macs, wonderful Macs!
I am not lyin'!
No autoexec.bat!
Without Macs I'm cryin'!
Eeeasy installation. That's OS 8!
Spring-loaded folders! Eat that, Bill Ga-ates!
Macs, wonderful Macs!
Using the best OS,
And best of all,
Never see DOS!
Cross-platforming is a breeze on my Mac.
You Microsuck dweebs can sit on a ta-ack!
—Neal Te Paske

(Sung to the lyrics of "American Pie" by Don McLean)
A not so long time ago,
I can still remember how Amelio used to make me smile.
And I thought if he had his chance,
That he could make the earnings dance,
And maybe the press would be happy for awhile.
But soon his words made me shiver,
With every rambling speech he delivered,
Bad news on the doorstep,
I couldn't take one more step.
I can't remember if I shouted
When the *Wall Street Journal* whined and pouted,
But something touched me deep inside
The day Amelio was ousted.

So bye, bye, Mr. Turnaround Guy
He drove the break-even point to 8 billion
But even that was too high.
He couldn't stop the press from saying Apple would die,
And he never should have worn a tie,
He never should have worn a tie.
—Jason Glick

Recently Sighted



Vonn Miller, who works for Apple Higher Education, also shares the iMac's birthday—August 15. Several of our readers also sent in letters about sharing the Bondi blue wonder's special day, but Miller also sent in a picture of his birthday cake all done up in the shape of an iMac. What attention to detail—even the mouse cable is translucent. In a horrible mistake, it was reported that several of Vonn's friends, who baked the cake, tried to use it as an iMac, mistaking it for the real thing. Not only were there messy hands, but you should have seen the mess when they tried to plug it into the wall. Getting all of that butter-cream frosting out of the phone jack won't be easy, either. Happy birthday, Vonn, and all of those who share Vonn's—and the iMac's—birthday.

You Want Fries with That?

While waiting for a slow-moving freight train to pass in Birmingham, Alabama, I observed the following ad on the side of one of the cars. The gentleman in the truck with me truly believes I have lost my mind chasing down a freight train to get a picture of it. I had to confess that all Mac users do think and act somewhat differently. I hope we can look forward to *MacAddict* Happy Meals very soon, with an iMac in each one.—B.L. Choate

Once upon a May 6 of '98

Hey, *MacAddict* people. I wrote a song about the iMac! Here it is.

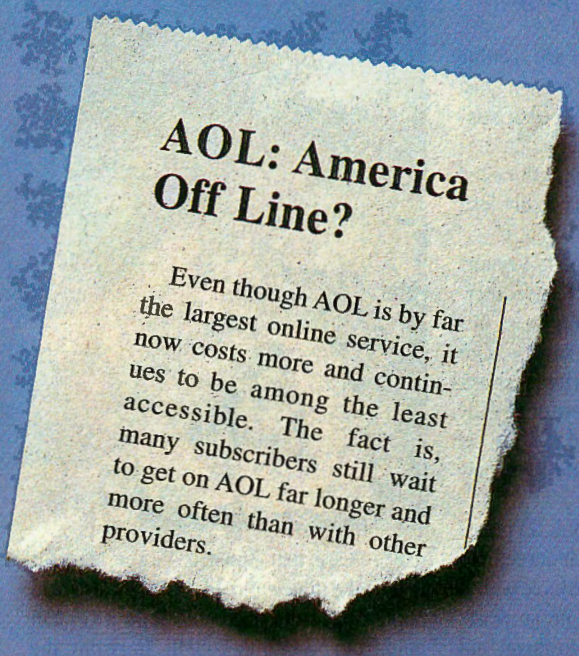
Apple had a very exciting date
Its newest computer was to be revealed
Much good was to come out of this deal
So the brave Steve Jobs showed up that day
With a trick up his sleeve, PC users would pay
He walked to where his creation rested
Bill Gates's sanity would soon be tested
And there he stood, calm and ready
Things were going nice and steady
He yanked off its cover, and here we go
All the audience could say was, "Whoa!"
Under the curtain that Steve tossed back
Was Apple's new baby...the iMac!
They gazed in awe at its Bondi blue
On the case of the new arrival, wouldn't you?
Bill Gates's pride and dignity then cracked
At the most original Macintosh since the original Mac.—Michael Wohl

(Sung to "O Canada")
O Macintosh
Our home and native platform
True coded software
In all our processors command
With glowing screens
We see thee start up
The true OS is here

From nets and email
O Macintosh, we stand on guard for thee
Steve, keep our platform superior in every way
O Macintosh, we stand on guard for thee
O Macintosh, we stand on guard for thee
—Josh Hague

EarthLink Network TotalAccess software is included on the enclosed CD-Rom

These days, many AOL users are finding themselves S.O.L.



AOL: America Off Line?

Even though AOL is by far the largest online service, it now costs more and continues to be among the least accessible. The fact is, many subscribers still wait to get on AOL far longer and more often than with other providers.

Access, of course, is everything. And if you're looking to AOL to provide it, you're *?!# out of luck. With EarthLink, you'll find that we're up 99.9% of the time. You also won't be burdened with the annoying busy signals and disconnects AOL is famous for (nor their high prices: we're still $19.95 a month). And because we have more local access numbers than any other Internet Service Provider, you can also get on the Net more easily. Speaking of easily, that's how you can get in touch with us. Our phone number is cleverly listed below. Talk to you soon.

PC MAGAZINE ISP RATINGS (9/97)

	EarthLink	AOL
Call Rate Success	Good	Poor
Average Throughput (download speed)	Excellent	Poor
Web Throughput Success	Excellent	Good
Overall Performance	Good	Poor

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PhotoScripter premieres, Power On proliferates, plus puns aplenty.

Seems Like Seybold Times

The gems in Jobs's jargon

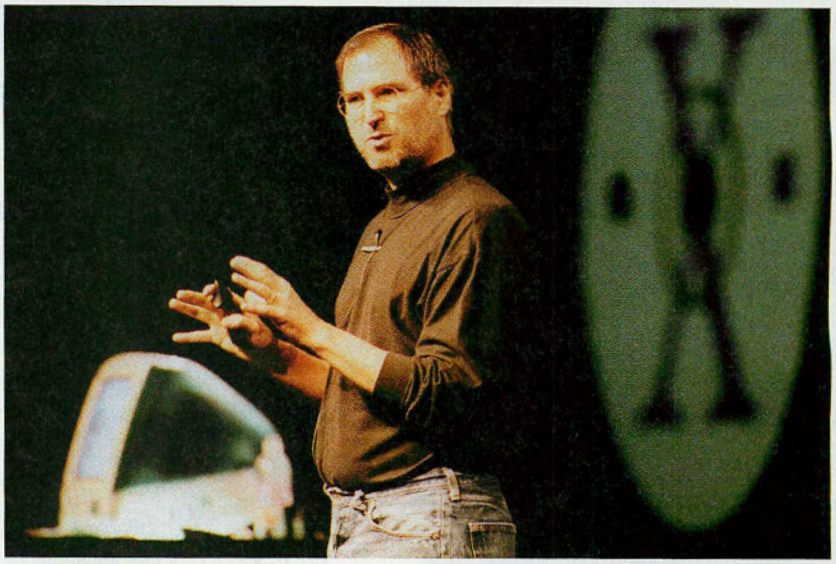

PHOTO: AARON LAUER

Steve Jobs's keynotes are getting predictable, and we're not just talking fashion. Apple's cash supply is up; Apple is profitable; computer press people are generally ugly, conceited jerks; and the G3 processor is really fast. We're bored already.

Things being as they are, Jobs's keynote at September's Seybold publishing conference in San Francisco covered a lot of this well-trodden ground. Let's just say it was no OS X introduction. But after sorting through the reality distortion field, a slew of already market-saturated videos, and a pile of redundant iMac hype, we did find a few new and interesting developments.

■ Apple rethought its PowerBook G3 plans, and has thrown out the 13-inch screen. To many who purchased a PowerBook with a 13-inch screen, this comes as no surprise, as they were long ago forced to throw out the hope that their orders would ever arrive. The shoddy 12-inch, passive-matrix version is still for sale, but during his speech Jobs indicated that future models would be 14 inchers only. The lowest-end PowerBook processor, a 233MHz G3, now comes with 512K of backside cache. (Apple previously offered a 233MHz G3 without any backside cache as a budget PowerBook option.) The lowest price for a 14-inch, 233MHz, 512K G3 PowerBook is now $2,799. While Jobs didn't mention it in his keynote, Apple nonetheless announced at Seybold that the G3 PowerBooks also now ship with an ATI Rage LT Pro graphics accelerator and support multiple resolutions.

■ Jobs touched on the fact that you can now score a 333MHz Power Mac G3. Catalogs have already begun advertising a 366MHz model, but at press time, Apple and the catalog manufacturers agreed that no such Mac exists. For now, we're betting that Apple balked at the last minute at releasing a 366MHz model. Keep an eye out—Apple may release that 366MHz Power Mac for real by the time you read this. Jobs also said Apple upped the maximum RAM a G3 can hold from 384MB to 768MB. In reality, the G3 RAM limits rose because RAM developers now offer 256MB DIMMs—Apple didn't actually change anything.

■ Jobs showed off Mac OS 8.5's increased copy speed, boasting, "We are better than any other high-volume OS in copy performance." He and Apple vice president Phil Schiller demoed OS 8.5's speed by performing several large file transfers on both OS 8.5 and Windows NT. "It looks like we're winning," said an eager Schiller. "We'd better," commanded Jobs. They also demonstrated OS 8.5's new search abilities, ColorSync, and AppleScript enhancements—including a new extension allowing for AppleScriptable Photoshop 5 (see "Main Event's PhotoScripter," p22).

■ QuarkXPress, Adobe Photoshop, and Macromedia FreeHand were all shown running on OS X, and dignitaries from each company came on the stage to endorse Apple's Rhapsody and OS 8 hybrid again. In a shift from how he treated the iMac's release, Jobs seems to be letting OS X out enough in advance to have vendor support coincide with the product's release, still targeted for over a year from now. Rhapsody, however—now titled OS X Server—should be available before January.

■ Jobs once again put WebObjects, the hefty server-side Web technology he brought over from Next, in the spotlight. Version 4.0 costs a mere $1,499, runs five times faster than before, and serves Java applets. Jobs said WebObjects now runs on Windows NT, Solaris, and OS X Server.

■ Last but not least, Jobs's keynote featured a demo of the much-anticipated K2 page-layout program from Adobe. K2, which works with PDF as its native format, skewed and tweaked text and graphics in a way Quark can only dream about—or possibly purchase (see "Fish or Cut Bait," p21).

That pretty much wraps up the new tidings from Jobs. This performance was slightly less spirited than the norm, but that didn't stop us in the audience from cheering and crying on cue. We now mark our calendars for Macworld Expo in January, where we should be treated to far more fireworks, perhaps a consumer portable, and hopefully something other than a black turtleneck.—*RC*

OS 8.5's Publishing Jive

Jobs's saucy preview of the next Mac OS

Jobs spent a lot of time during his San Francisco Seybold keynote touting the benefits of the soon-to-be-released Mac OS 8.5. While he didn't give it all away, he did point out four features that should make publishing and design people very happy—and incidentally give a boost to everyone else who uses a Mac. Here's a look-see:

■ **Sherlock**—With the revamped search features of Mac OS 8.5 (which uses the long-awaited VTwin search technology), Mac users can use a simple Command-F key combination to search their hard drives at lightning speed, or dispatch the same search to several Internet search engines. Users can also save searches to the hard drive, where they'll act like normal documents. The search ranks results by relevance, and returns a text summary of the found document. Creepily enough, along with the summary, the search returns an ad banner. What does the Mac OS soul go for these days anyway?

■ **Fast Network File Copy**—No mystery behind this. Mac OS 8.5 copies files over a network at speeds up to twice as fast as Mac OS 8.1, and allegedly faster than Windows 95 or NT. During the keynote, Jobs demonstrated this by copying two files of over 100MB each using two Macs running Mac OS 8.5 and two Windows NT machines. The Mac won hands down both times.

■ **ColorSync**—It's still a mystery to most people, but ColorSync is important enough to attract the attention of publishing biggies such as Heidelberg and Kodak, which have already created plug-in ColorSync profiles. With OS 8.5, ColorSync will get fresh blood in the form of profiles from Agfa and Imation. Jobs also reiterated that ColorSync was going to go cross-platform, bringing consistent color to the Windows world, thanks to Apple. Maybe soon Bill Gates will say, "ColorSync is my color manager of choice."

■ **AppleScript**—After letting AppleScript languish for years in a near-death vegetative state, Apple is revving it up. It is now PowerPC native, boosting speed by up to five times. Almost all of Mac OS 8.5 will be scriptable, from the Finder to ColorSync to folders. Yes, you can now associate folders with AppleScripts. Imagine the fun of attaching a "close folder" AppleScript to a folder, so that every time it opens it immediately closes! Bwahahahaha.—*DR*

Fish or Cut Bait

Quark expresses bizarre intention to eat Adobe

Quark, vendor of the QuarkXPress page layout program, recently unveiled a brassy proposal to acquire longtime desktop publishing rival Adobe Systems. Quark first approached cochairmen John Warnock and Charles Geschke, offering to buy "all or a significant portion" of Adobe's stock for an unspecified premium over the stock's current price. When Warnock and Geschke rebuffed the offer, Quark went public with an appeal to Adobe's board of directors and a veiled threat to make its pitch directly to the company's stockholders.

In Quark's initial proposal, released as part of its public announcement, CEO Fred Ebrahimi promised "synergies, cost-savings and cross-marketing opportunities" from the fusion of the two companies. Ebrahimi pledged to sell off Adobe's K2 and PageMaker products—plus FrameMaker, if necessary—to third parties to address regulatory concerns. Presumably, the product and technology synergies Quark envisions would thus come from the combination of QuarkXPress with Adobe's graphics and multimedia line (Acrobat, Photoshop, Illustrator, Premiere, and so on).

Though the privately held Quark doesn't release the details of its finances, press and analysts assessed the company as being about a fourth of Adobe's size. And though Adobe's stock has halved in value over the last couple of months in the wake of recent bad financial news—including management reorganizations, slow revenues, and planned layoffs of up to 300 employees—as of press time acquiring even half the company's 67.2 million outstanding shares would still cost at least $1 billion dollars. To bolster its case, Quark accompanied its announcement with a press release touting its sustained growth over the last six months (while pointedly avoiding actual dollar figures) and an assurance that "the necessary financing for this transaction is available and can easily be arranged."

But even if Quark can get the money, and even if its overture comes at a particularly low point for the target company, Adobe's management isn't biting. In a public response, Adobe said that Quark's proposal "failed to state any material terms that would constitute a firm and bona fide offer, including price," and reiterated that the company "is not interested in pursuing discussions with Quark." The announcements came a week before the big San Francisco Seybold publishing conference, lavishing attendees of the usually dry convention with controversy and excitement. (Coincidentally, the conference also featured a sneak peek at Adobe's new K2 page layout program, affectionately dubbed the Quark Killer.) At press time Quark's publicity and Adobe's stock are shooting up, Adobe remains baffled by the offer, and Quark is refusing to give any more clues as to how and when it plans to continue with such a bid. Will Quark get seriously down and dirty, or is this just a 1998 version of the Ellison-taking-over-Apple flap? Gosh, we'll just have to wait and see.—*MS*

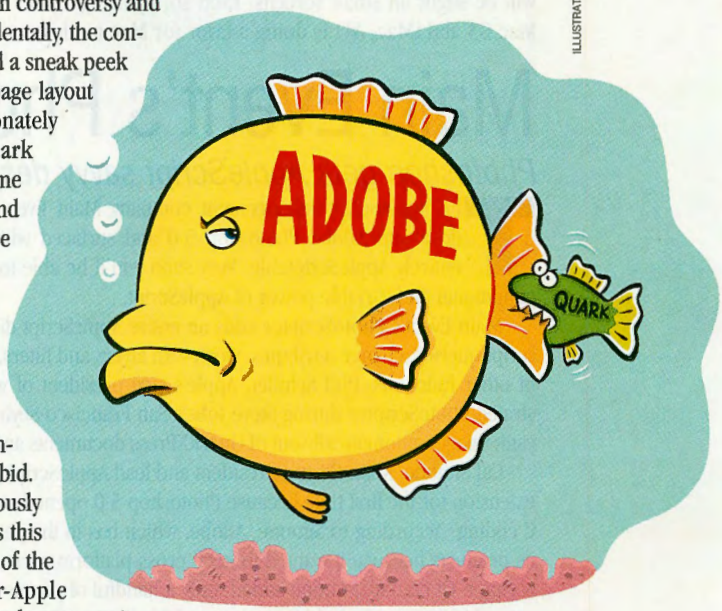

ILLUSTRATION : DAVID COULSON

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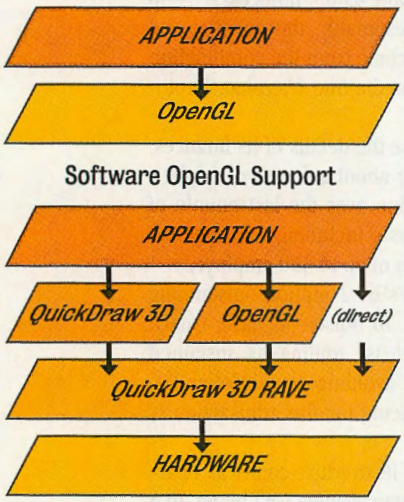
3D Speed Boost

ATI brings OpenGL hardware acceleration to the Mac.

The slow, steady progress of OpenGL on the Mac platform just took a big step forward with the news that ATI Technologies will provide hardware acceleration for the cross-platform 3D graphics library. With the arrival of ATI's new driver software in September, games and 3D applications based on OpenGL can get hardware acceleration from ATI's line of graphics chips. This is an especially swell development for G3 owners, as ATI's Rage II and Rage Pro chips are not only found in ATI's graphics cards, but also come built into every G3-based desktop Mac (the iMac too).



How hardware 3D acceleration works

Originally devised by Silicon Graphics, OpenGL is now maintained as an independent standard. Like Apple's QuickDraw 3D, Open GL supports rendering, texture mapping, and special effects features useful for both game and 3D modeling developers. The Mac titles that currently support OpenGL include Hash's Animation:Master, Strata StudioPro, NewTek's LightWave 3D, autodessys's formZ, and the X-Plane flight simulator.

The Mac implementation of OpenGL, provided by Conix (http://www.conix3d.com) and bundled with OpenGL-based applications, handles 3D functions by performing them in software. But Conix's OpenGL also supports hardware acceleration by way of Apple's QuickDraw 3D RAVE, provided the vendor of the graphics accelerator card has made the necessary changes to its driver software. Village Tronic's Picasso 540 + 3D Overdrive, MacTell's Vision 3D Pro II, and Newer Technology's RenderPix already support OpenGL hardware acceleration, and now ATI has hopped on the bandwagon.

According to the official OpenGL Web site (http://www.opengl.org), ATI's new drivers will work with the Rage II chip (found in the iMac and early Power Mac G3s) and the improved Rage Pro (used in later Power Mac G3s), provided the Mac has at least 6MB of VRAM. Putting the Rage Pro's muscle behind OpenGL should increase texture-mapping performance six to eight times and double phong shading performance compared to software-only OpenGL. The Rage II will yield only half this performance, however, and the difference will be slight on small screens. Even so, by bringing this OpenGL speed boost to Apple's Power Mac G3 and iMac, ATI is doing a favor for Mac modelers and gamers alike.—MS

Main Event's PhotoScripter

Photoshop gets AppleScript savvy despite Adobe

The AppleScript-enhancement company Main Event (http://www.mainevent.com) recently dove into Adobe Photoshop 5.0 and surfaced with an extension that makes Photoshop entirely AppleScriptable. Very soon you'll be able to size, scale, blur, and twirl with all the conditional and variable power of AppleScript.

Main Event's PhotoScripter adds an entire AppleScript dictionary to Photoshop, allowing you to script queries, change attributes, work with layers and filters, save as different formats, and do a ton of other functions. Phil Schiller, Apple's vice president of worldwide product marketing, demonstrated PhotoScripter during Steve Jobs's San Francisco Seybold '98 keynote, using the extension to yank images automatically out of QuarkXPress documents and then turn them into Web page images.

Cal Simone, Main Event's president and lead AppleScript guru, said he was able to make such an extension for the first time because Photoshop 5.0 opened some of the program's internal actions to C coding. According to Simone, Adobe, which has in the past resisted implementing AppleScript in its products because it wanted to keep cross-platform parity, has been reluctant to embrace PhotoScripter. Of course, Simone added, only a handful of people at Adobe were even aware the product existed before the Seybold keynote. As of this writing, Simone had yet to set a price or method of distribution, but he expected to have PhotoScripter ready by the time you read this.—*RC*

Tech Info Tidbits

Useless bits of knowledge to make the world a better place

(Source: Apple's Tech Info Library at http://til.info.apple.com)

DID YOU KNOW that Apple has a Technote describing how to create a secure yet memorable password? Here's a selection of tips:

- Don't use ATM passwords for any other purpose, or you may lose some cash should someone gain access to your ATM card.
- Make your password at least six characters long.
- Use backward passwords—such as changing "disco" to "ocsid."
- Use numbers in place of letters—for example, changing "disco" to "d1sc0."
- Make an acronym out of a phrase. For example, "Use the force, Luke" becomes Utf,L. Be aware that not all punctuation works in all situations, so use it with caution.

A COUPLE OF TIDBITS ON THE IMAC

- The iMac's case is made of a translucent polycarbonate plastic. To clean it, Apple recommends a damp, soft, lint-free cloth on the exterior. Don't use aerosol sprays, solvents, or abrasives, and don't use anything containing isopropyl alcohol, or you may damage the case.
- When picking up the iMac, use one hand to lift it using the handle (which Apple says will support the iMac's entire weight), and use the other hand to support the iMac under the front of the monitor.—*DR*

Two Important Reasons To Consider Mitsubishi's 21" (19.7" DVI*) Displays.

The Astounding Line Of Award-Winning, Affordably Priced Displays.

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Diamond Pro 91TXM	0.28 mm	1600 x 1200/75 Hz NI	H: 30-95 kHz V: 50-152 Hz
Diamond Pro 1010e	0.26 mm	1800 x 1440/76 Hz NI	H: 30-115 kHz V: 50-152 Hz
Diamond Pro 1000	0.28 mm	1800 x 1440/76 Hz NI	H: 30-115 kHz V: 50-152 Hz

* DVI: Diagonal Viewable Image. Resolution refers to maximum addressable resolution H x V.

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Designed for Microsoft Windows 95 Mac OS

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No Fun Intended

We'll have pun, pun, pun 'til her daddy takes our G3s away

Here are 101 Mac puns, for no particular reason

- Beta late than never
- Sticks and stones may break my bones but Word will never hurt me
- Good menus are hard to Finder
- Put up or shut down
- If I only Newton then what iMac now
- You scratch my disk, I'll scratch yours
- The Mac Farm: a cache cow, a memory hog, and a DRAM
- Moof it or loose it
- Take this job and StuffIt
- Between a rock and a hard drive
- A Finder, gentler application
- Just Undo it!
- AppleShare and share alike
- Beggars can't be Choosers
- Finders keepers
- Don't put the cart before the OS
- AppleTalk of the town
- Nobody likes a force-quitter
- It's raining like Macs and dogcows
- Pie à la modem
- Let AppleEvents take their course
- What starts up must shut down
- Hey bartender, can I get a SCSI navel?
- UnderPerforma
- It only megahertz when I laugh
- Jack be nimble, Jack BeOS
- QuickDrawn and quartered
- Ready! Aim! FireWire!
- Mac OS X gets a bad Rhapsody
- CD-ROM was not burned in a day
- The difference between write and ROM
- The Chickens have flown the Cupertino
- Cupertino d'état
- Keyboard shortcuts like a knife
- Restart imitates life
- QuickTime heals all wounds
- Made in the RAID
- The march of DIMMs
- Motorola joint
- Less is Motorola
- Get the LED out
- Server with a smile
- The Lord is my screen saver
- Iconfusion
- That heat sinking feeling
- Select All's well that ends well
- SCSI come, SCSI go
- If you can't stand the heat, get out of the Pentium
- Cause and AfterEffects
- Can't see the forest for the b-tree hierarchy
- Like an Adobe Acrobat outta hell
- I love Claris in the springtime
- Megabyte me
- The modem, the merrier
- ColorSync or swim
- Your wish is my Command-Option-Shift

Movies

- The System 7 dwarves: OpenDoc, OpenSneezy, OpenBashful, OpenGrumpy...
- *The GUI, the Beta, and the Ugly*
- *SIMM Like It Hot*
- *The Way We Woz*
- *Gone with the Windows*
- *RAIDers of the Lost Ark*
- *Clockwork Orange Micro*
- *Photoshop of Horrors*
- "Desktop of the world, ma"
- "May the zero insertion force be with you"

Television

- *Allegroing Pains*
- *Mac OS8 Is Enough*
- *Tales from the AppleScript*
- *SuperMac and OS Lane*
- "PowerBook 'em, Dano"

Music

- "How Much Is That Dogcow in the Window?"
- "Fight the PowerPC"
- "Puff the Magic Drag-and-Drop"
- "Sitting on the OpenDoc of the Bay"
- "A Hard Disk's Night"
- DuRAM DuRAM
- Depeche Modem
- Wall of Voodoo2
- VRAM Halen
- Mötley CPÜ
- SCSI Osbourne
- ROM Speedwagon
- Banana RAMa

Books and Literature

- *Lord of the Files*
- *Cacher in the Rye*
- *Little Boy Blue Box*
- *Unsafe at Any SpeedDoubler*
- *Of Mice and Menus*
- *Portrait of a Hard Disk as a Young Volume*
- *The Upgrades of Wrath*
- *Don Quixotkey Caps*
- *CPUlysses*
- *The Infrared Pony* by John Steinbackup
- *The PostScript Man Always Rings Twice*

Shakespeare

- Adobe or not Adobe, that is the question
- What light through yonder Windows sucks
- *ROMeo and Juliet*
- Beware the SCSI IDs of March
- Lady Macbeth: "Out, damned slot! Out, I say!"
- Partitioning is such sweet sorrow

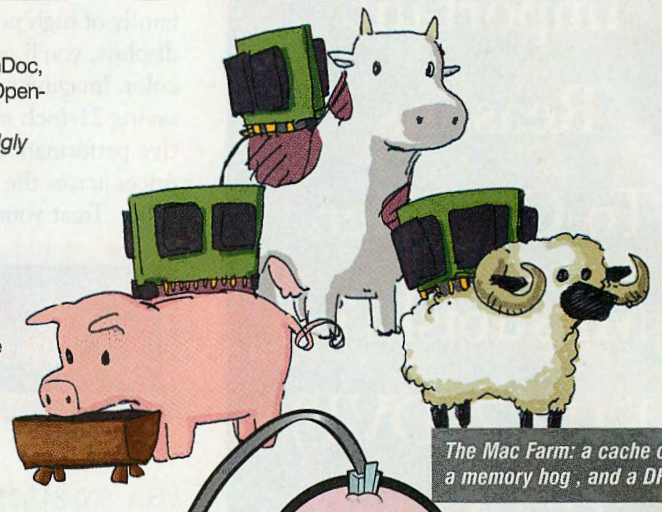
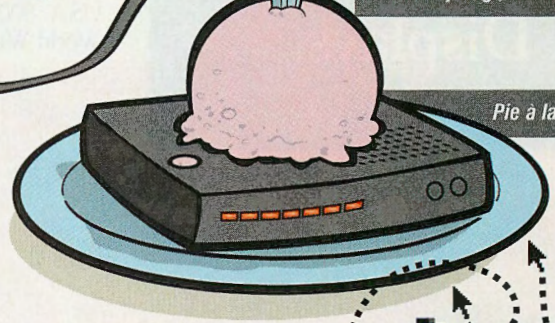
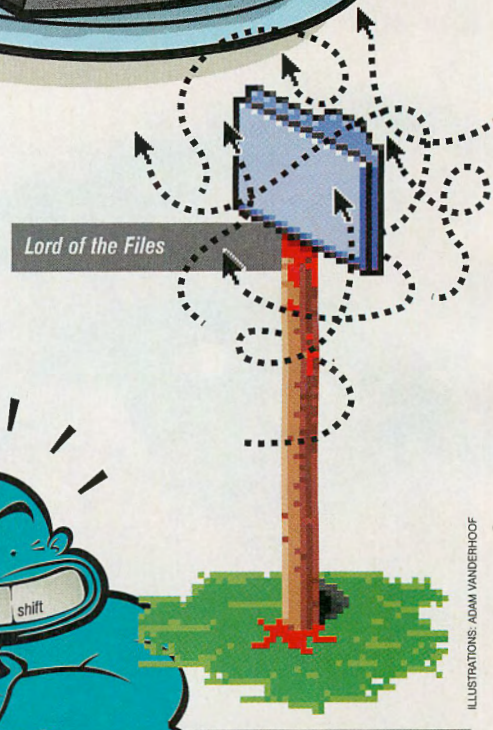


ILLUSTRATION: MARK SIMMONS

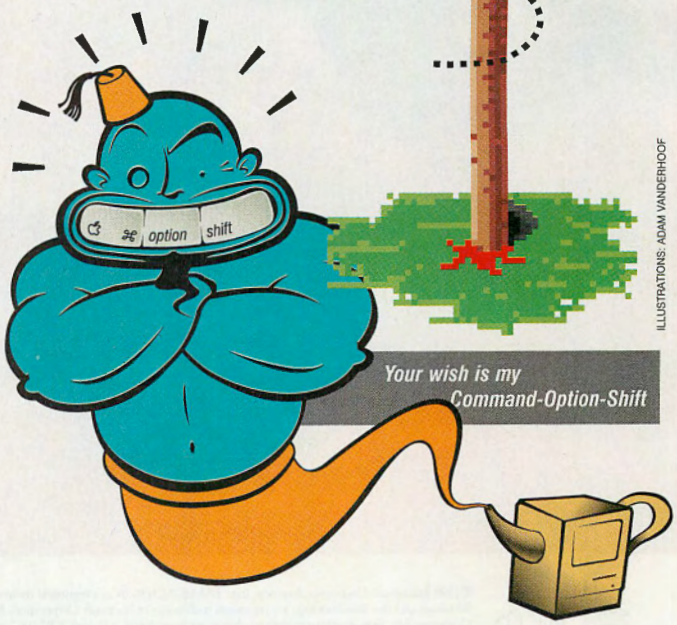
The Mac Farm: a cache cow, a memory hog , and a DRAM



Pie à la modem



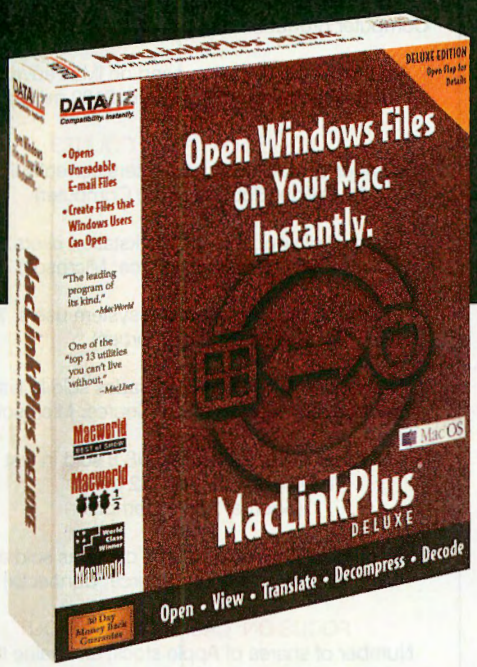
Lord of the Files



Your wish is my Command-Option-Shift

ILLUSTRATIONS: ADAM VANDERHOOF

Surviving in a Windows world just got easier.



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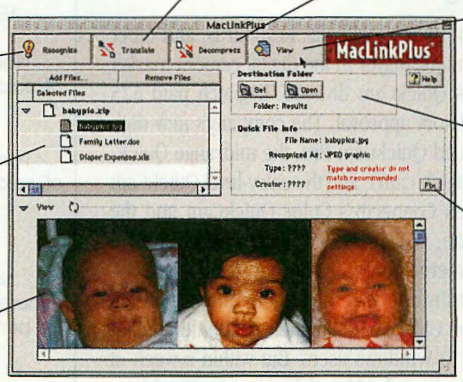

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get info

Now Utilities Powers On

Action Now?

Back in early August, Power On Software (maker of that oh-so-cool utility Action Files) purchased Now Utilities from Qualcomm (maker of Eudora, among other things). Although Qualcomm had promised a Mac OS 8–compatible version of Now Utilities, after several months it still hasn't materialized, and it probably won't—at least not with the name Now Utilities.

Instead, Power On plans to issue the most popular components of Now Utilities in new and enhanced forms. Power On points to Action Files as an example, saying that it "offers improved functionality over Now SuperBoomerang." Plus, it works with Mac OS 8. What's next on the list of Now Utilities to be replaced by Power On equivalents? Well, Power On isn't saying for sure, but it has indicated that Now Menus and Now WYSIWYG were both very popular, and that the company has been hard at work on Action Menus and Action WYSIWYG. You do the math.

So if Power On is just going to replace Now Utilities piece by piece, why is this good for Now Utilities fans? Well, it means that a lonely, orphaned—and popular—set of utilities has found a home. Power On will continue to market, sell, and support Now Utilities for those who haven't made the jump to Mac OS 8—and that's still a pretty substantial group of Mac users. By the way, for those who follow such things, Power On was founded by the developers who wrote many of Now Utilities' most popular components.—*DR*

Logitech Snaps Up QuickCam

Connectix out of the picture

Logitech, best known as a vendor of mice, trackballs, keyboards, and other input devices, has now become a major player in the digital camera market with the acquisition of Connectix's QuickCam division. Logitech paid $25 million in the deal, which still awaits regulatory approval. The company's new digital camera lineup will consist of the high-end QuickCam Pro, the midrange QuickCam Home (formerly previewed as the Logitech.cam), and the entry-level QuickCam VC; the company will also continue to sell Connectix's Color QuickCam and the QuickClip video-capture gadget. Meanwhile, Connectix will become exclusively a software company, providing utilities and Internet tools for Mac and Windows users.

Logitech's digital camera line is noteworthy as one of the few USB pioneers. Until the advent of the iMac, the line's reliance on USB meant that the videoconferencing-oriented QuickCam VC was available only to Windows users. But within a week of the iMac's arrival, Connectix released a Mac driver for the QuickCam VC (available from http://www.connectix.com), and Logitech is now selling a Mac-labeled version of the camera. In this case, at least, Apple's controversial jump to USB seems to be an asset rather than a liability—and the QuickCam VC's higher performance and lower price tag ($99 after a $30 rebate) also serve to showcase the advantages of the USB camera over the serial port–based Color QuickCam. The QuickClip and QuickCam Home are likewise USB based, so Logitech's digital camera and digital video line seems nicely aligned with Apple's hardware strategy.—*MS*

PHOTO: KEN BOUSQUET

The MacAddict Index

Number of iMacs the ComputerWare chain sold from midnight to 2 a.m. on August 15, 1998: 225

Percentage of ComputerWare's first 500 iMac buyers who were first-time computer owners: 15

Percentage of those replacing an existing computer who were switching from Windows: 13
(Source: Market Metrics)

Number of 20-foot-high inflatable iMacs Apple Computer produced for promotional purposes: 39

Amount Apple plans to spend on iMac advertising during the remainder of 1998: $100 million

FOCUS ON: HEAD COUNTS

Number of Macintosh computers currently in use: 22 million (Source: Apple Computer)

Number of Windows NT Workstation users as of July 1998: 15 million (Source: Microsoft)

Number of Linux operating system users: 7.5 million (Source: *Forbes*)

Number of Windows 98 upgrades sold in first 25 days of availability: 1 million (Source: Microsoft)

Number of copies of Mac OS 8 sold in first 14 days of availability: 1.2 million
(Source: Apple Computer)

Number of QuickCam digital cameras sold as of May 18, 1998: 1 million (Source: Connectix)

FOCUS ON: CASHING IN AND OUT

Number of shares of Apple stock, and value thereof, sold by Apple senior VP Mitch Mandich August 1, 1997, to August 28, 1998: 30,000 ($676,300)

Number of shares of Apple stock, and value thereof, sold by Apple CFO Fred Anderson during this period: 133,334 ($4,874,691)

Number of shares of Apple stock, and value thereof, sold by interim Apple CEO Steve Jobs on June 26, 1997: 1.5 million
($21,937,500)

Number of shares of Microsoft stock, and value thereof, sold by Microsoft CEO William H. Gates III between August 1, 1997, and August 28, 1998: 12,876,519 ($1,293,516,309)

FOCUS ON: TAKING STOCK

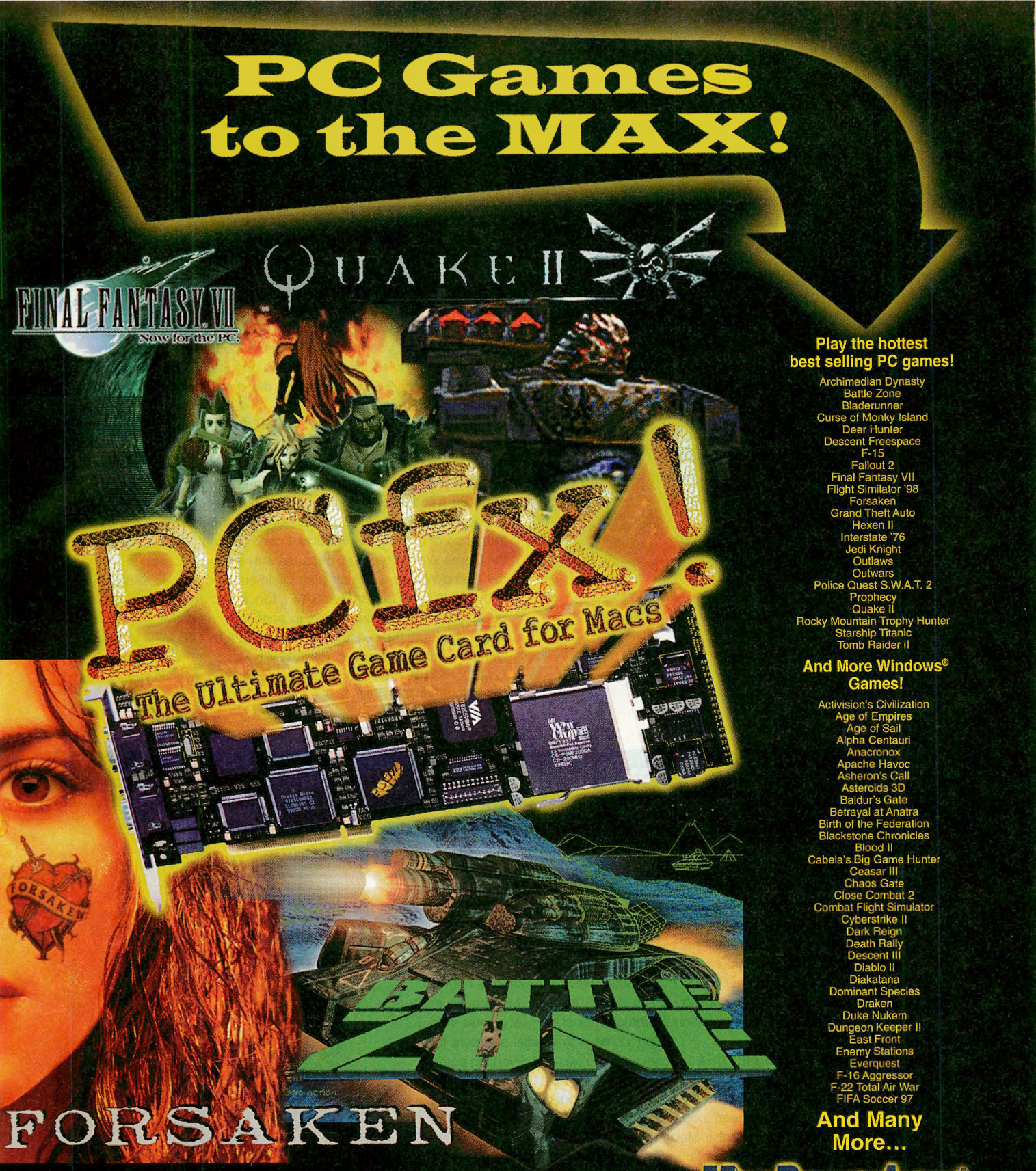
Value in dollars of Microsoft stock held by William H. Gates III as of August 28, 1998: $58,059,430,296
(Source: Yahoo Finance)

Number of shares of Adobe System stock outstanding as of June 26, 1998: 67,198,400

Total value of these shares as of August 28, 1998: $1,826,956,500

Number of times Gates could buy Adobe: 31.8

PC Games to the MAX!



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Cyberstrike II
Dark Reign
Death Rally
Descent III
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Diakatana
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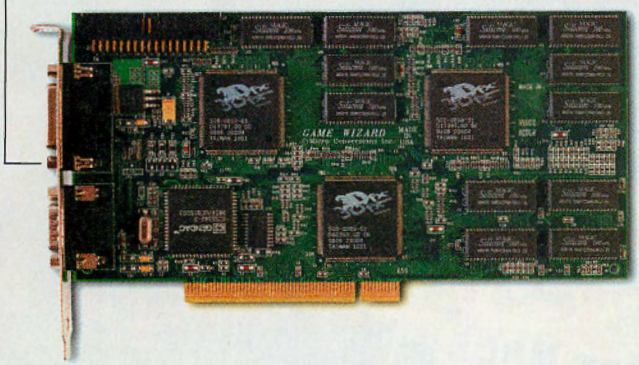
cravings

It's fall, but we've already fallen for these finds.

Game Wizard

Micro Conversions



Gamers, you've heard about it, you've seen it, and while your PC-gaming friends were having all the fun, you longed for it—Voodoo2. Yes, the Voodoo2 chip set extraordinaire is now available for the Mac. Voodoo2 offers optimal performance for intense 3D games such as Unreal and—in the near future—Myth II: Soulblighter. Why? 3Dfx Interactive, the developers who realized the original Voodoo, Voodoo2, and Voodoo Rush, optimized these chips for maximum polygon potential—we're talking 3 million triangles per second, 90 million pixels filled per second, and 180 million texels per second. Sound like a lot? It is! The Game Wizard's Voodoo2 power pumps out three times the performance of the original Voodoo. I can't tell you how wicked cool the Game Wizard really is, because only seeing is believing. With the Game Wizard, you can play Glide-enabled games at 800 by 600 and 20 to 40 fps; it does RAVE, too. If that isn't enough, you'll be able to connect two cards in scan line interleave mode, so they'll crank out the pixels in parallel at 1024 by 768. Whew! If you want to enchant your Mac games with Voodoo2 (8MB for $299, 12MB for $349), rush over to http://www.microconversions.com or call 877-986-4276.—*JH*

PUMP UP THE POLYGONAL PLEASURE, PLEASE.

Modem Saver Plus and Modem Saver International

Road Warrior International

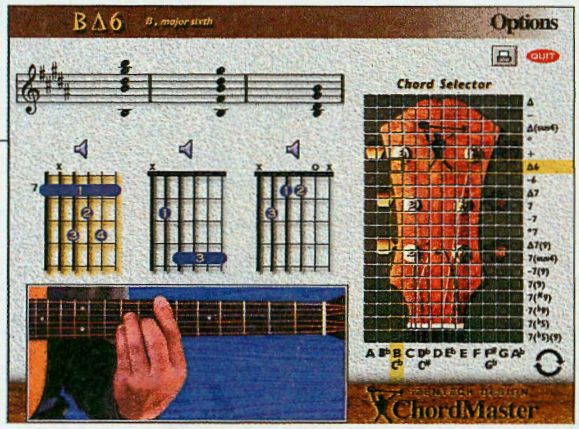
Recently *MacAddict* received a letter from a reader whose modem was fried by lightning. Unfortunately we couldn't save his modem, but as a public service to our millions of readers we offer a cautionary tale and an ounce of prevention. The practical Modem Saver (in Plus and International versions) from Road Warrior International does two things. First, it lets you check the phone line for excess current before you connect your modem. Second, it serves as a surge protector to guard your modem from unsightly burns the unruly PBX systems installed in some hotels may cause. Have you seen a mighty $5,000 PowerBook G3 downed by a tiny surge? It's ugly. Modem Saver Plus and Modem Saver International protect against surges greater than 360V, come with special adapters for checking line two and reversing polarity, work on any RJ-11 phone line, and require no batteries. The International version filters out tax impulses, a type of surge found in European phone lines. If you don't like the taste of modem frittata, check out the Modem Saver Plus ($39.95) and Modem Saver International ($59.95) at http://www.warrior.com, or call 800-274-4277 or 714-434-8600.—*JH*

O MODEM MIA, NON MODEM FRITTATA.

Photo by Aaron Lauer

Zentech Chordmaster

Future Sales



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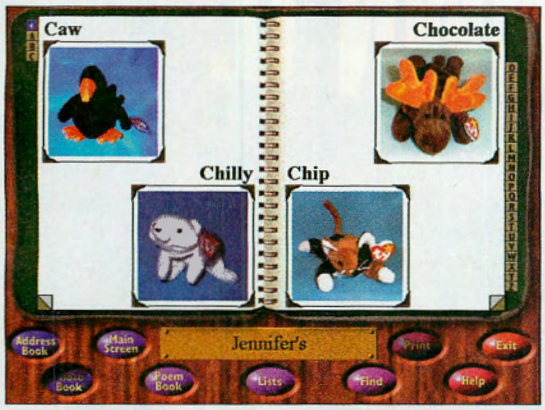
This spiffy CD-ROM features an interactive guitar-chord dictionary for those who want to learn some new chords and discover new fingerings or hear different chords together. The interactive program displays staff notation and fingering diagrams, and outputs sound samples of common guitar chords in three positions. You can listen to chords as a strum, an arpeggio, or a combination of both. You can also customize buttons for audio, display, and printing. All of Zentech Chordmaster's audio files are 16-bit, 22KHz AIFFs, which you can export into multimedia projects, digital audio applications, and MIDI systems. Seasoned musicians can construct simple or complex chord progressions in the Chord Selector Grid, or beginners without years of experience can point and click to create chords. Best of all, Zentech Chordmaster, which costs $29.95, requires only System 7.0 and 4MB of RAM to run. For more information, or to try out the online demo, quickstep over to http://www.zentechchordmaster.com, or call 425-788-0766.—*JH*

Beanie Baby Collector's Guide

MacSoft



LOOKING THROUGH THE BEANIE MENAGERIE.

A cultural phenomenon has arrived for the Mac. To round out your Beanie Baby collection, you need this collector's guide, which helps you tally up your babies with their vital statistics and current market value. The Beanie Baby Album features color pictures, birth dates, and retirement dates for all Beanie Babies through June 2, 1998. The guide also features specialty Beanie Babies such as Teenies, Opera Beanies, M&M Beanies, Harley-Davidson Beanies, and so on. Moreover, you can keep track of multiple collections, print lists of your bean-filled friends, and record the purchase price as well as the current market value. If you're a trader, you can track those you sold or traded. This is the database to have if you're a Beanie Baby collector. It costs $14.95 and runs on almost every Mac. For more information, point your browser to http://www.wizworks.com/macsoft, or call 800-229-2714 or 612-559-5301.—*JH*

GlobeTrotter

Curtis

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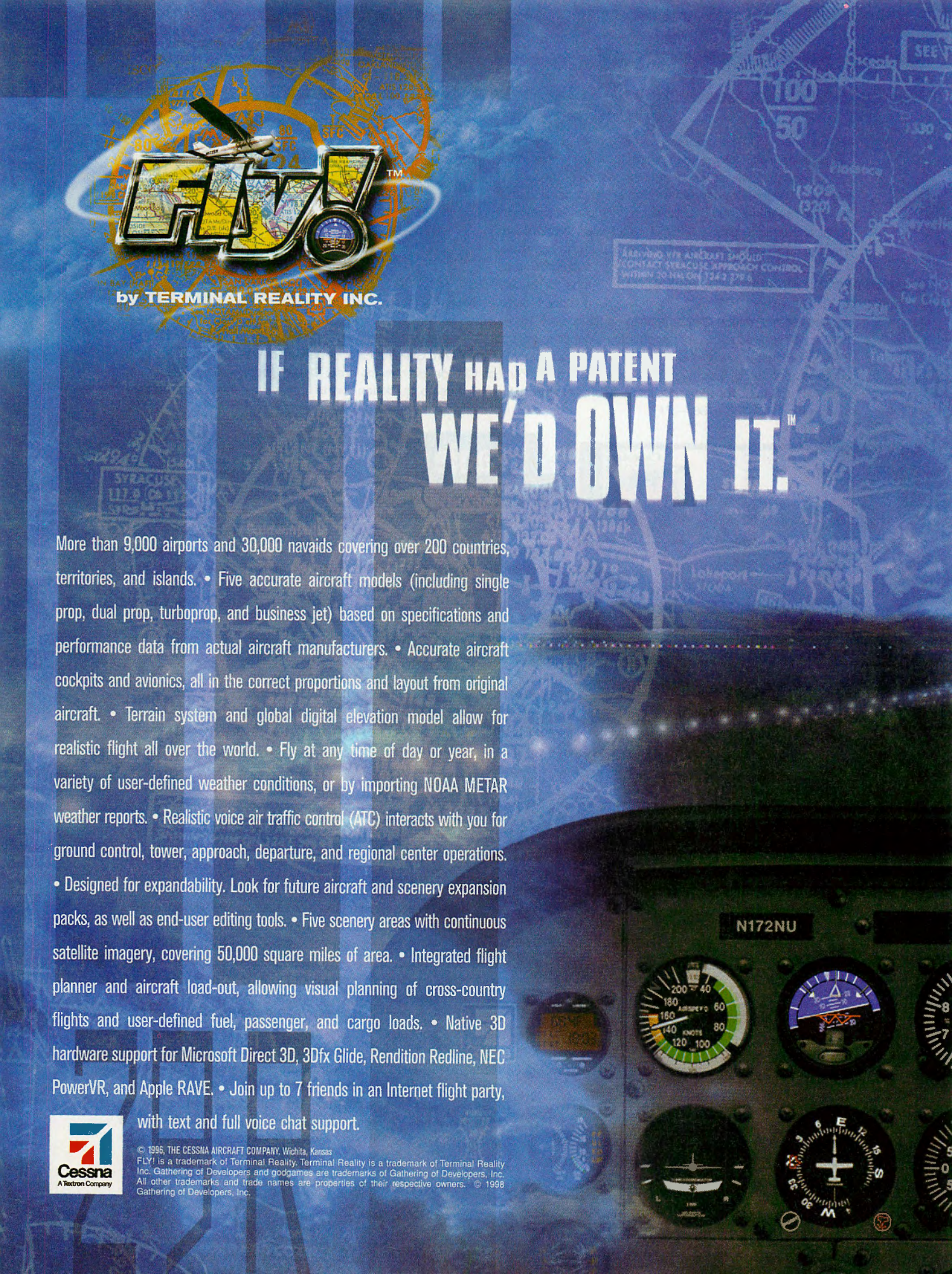
The GlobeTrotter is a new notebook tote with style, from Curtis. Look at those round, streamlined edges—and how about those patent-pending soft-grip handles made of polymer resin? The case is constructed of sturdy ballistic nylon with satin nickel hardware for the rigorous bumps and knocks that business travelers experience. GlobeTrotter also features pouches for power cables, floppies, Zip disks, and CD-ROMs. Need a key fob? GlobeTrotter has one you can access easily. Even better, GlobeTrotter comes in three sizes: slim ($74.95), standard ($94.95), and deluxe ($135)—the latter for that really fat PowerBook and all your manila folders. For more information (and style), jet on over to http://www.curtiscp.com or call 800-272-2366.—*JH*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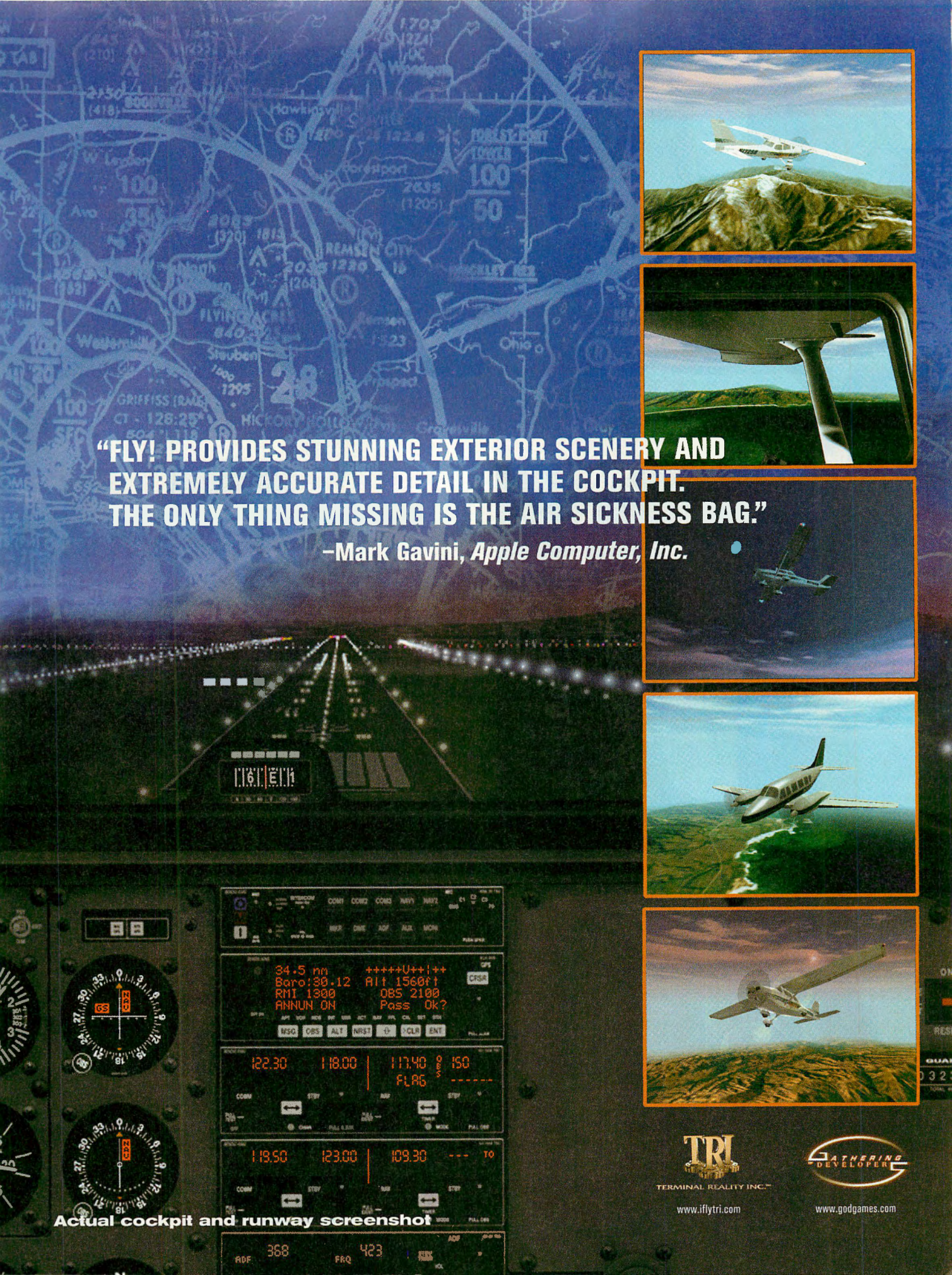
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BACK IN BLACK

40 REASONS WHY APPLE IS BIGGER, BETTER, AND BADDER THAN EVER

ck

This time last year, a shake of the Magic 8 Ball would have characterized Apple's future as "unclear, try again later." Despite the fact that Apple had just released Pentium-crushing G3-equipped desktop Macs, debuted Mac OS 8 to rave reviews and record sales, and unveiled its national "Think Different" ad campaign, public reaction was lukewarm. The bad news still overshadowed the good: Apple had just announced a quarterly loss of $161 million, with year-end losses mounting up to a staggering $1.045 billion. Reporters depicted the company as "struggling" and "beleaguered," stock hovered at around $15 a share, and consumers remained unconvinced that the Mac was back to stay.

What a difference a year makes. As of early September, bad press had given way to positive reports of Apple's comeback, stock prices had more than doubled to the 40s, and Mac sales were breaking store records with each new product release. Although Apple's year-end results will be announced while this issue is on the stands, the company has already made a total of $203 million in three consecutive profitable quarters.

So what went right? Simple: Steve Jobs, the man with the plan. Apple's cofounder learned a few lessons about running a business while he was banished from the fold. Here are 40 of them.

ILLUSTRATION BY ADAM VANDERHOOF

BY NIKKI ECHLER

1 Focus, focus, focus

Of all his accomplishments, Steve Jobs is best credited with his ability to focus. Before Jobs came back on the scene, Apple was playing blindman's bluff with its business plan—and losing badly. Unable to recognize its target consumer, the company tried to please everyone at once. The result was a bunch of bland products that pleased no one, a demoralized work force, a nonexistent ad campaign, a clogged-up network of resellers, a competing clone market that robbed the company of its biggest profits, and too much money and time spent on such endeavors as Copland and the Newton that distracted Apple from its core business. Jobs came in, keyed in on Apple's top priorities, and made tough decisions to eliminate anything that did not support those priorities. It was Jobs's ability to focus on Apple's key strengths that saved the company.

2 Plan for the future

The problem with achieving goals is that you have to have some first. One of Apple's biggest quandaries has been setting clear, long-term goals and inspiring people to see them through. Jobs, however, is a man with a grand plan. He has his eye on every aspect of the company, and he knows exactly what he wants to do with it. He makes decisions quickly, and they're usually the right ones—take the iMac, for example. Jobs's baby from head to toe, the iMac was conceived and developed in a speedy 10 months; most new products take a full 18 months or more from concept to release.

3 Make shopping fun

Although it's impossible to keep a close eye on each and every one of the 2,500 stores in the United States that sells Macs, Apple does its best to make sure your shopping experience is a good one. The company continually evaluates its reseller channel to make sure the stores it has authorized to sell Macs are actually doing their best to sell Macs. Last July, Apple pruned an undisclosed number of local resellers from its channel because the stores did not meet the company's desired level of Mac advocacy. Apple based its decision on who should stay and who should go by examining store revenues, as well as surveying each store on its level of commitment to selling Apple products and the Mac IQ of its sales team. Local field resources were then sent out to confirm the results before Apple delivered its eviction notices.

PHOTO COURTESY OF APPLE COMPUTER, INC.

As Apple cut back on apathetic local resellers, it reduced its distributors from five to two (Ingram Micro and Pinacor), and narrowed down its national resellers to one—CompUSA. Apple cited a strong relationship with the retailer, along with the chain's excitement over creating Apple-branded stores within stores, as its reasons for selecting CompUSA. It doesn't hurt that CompUSA has 148 superstores across the United States.

Although Apple received some flack from the press for narrowing its reseller channel at a time when the company was desperate to ramp up sales, Apple officials claim that the impact on its channel was very small. Apple declined to give any actual figures, but CompUSA announced that the percentage of Macs sold in its stores rose from 3 to 14 percent in just the first four months of the program—before the release of the record-selling iMac. Figures incorporating iMac sales had not yet been released at the time of this article.

4 Base inventory supply on demand

Historically, Apple has had a tough time forecasting product demand—the company either built too many machines or too few. Although forecasting supply to

5 Advertise, advertise, advertise

When Apple realized it needed a serious public image makeover, it hired the company that put it on the map in 1984. TBWA Chiat/Day, the ad agency behind the renowned 1984 ad, was directed to make Apple a household name once again. It hit gold with the now-famous "Think Different" campaign, which features visionaries such as Martin Luther King, Jr., Alfred Hitchcock, Jim Henson, and quite a few more we just don't recognize. Not only did the ad sport a trendy black-and-white look, but it made us *think* and realize that the best products have been made by the seemingly oddest people. By way of association, Apple made itself—once again—cool, and a hotbed of genius.

PHOTOS COURTESY OF APPLE COMPUTER, INC.

The TV version of the "Think Different" campaign was so successful that it was immediately parodied by ABC and CBS, and garnered an Emmy. Once Apple had established that the Apple brand was back, it started focusing parts of its TV campaign on promoting such products as the Power Mac G3s, the PowerBooks, and the iMac. Although Apple has not released figures for its marketing and ad budgets, it was pleased to announce that it would be spending upward of $100 million in media buys to promote the iMac.

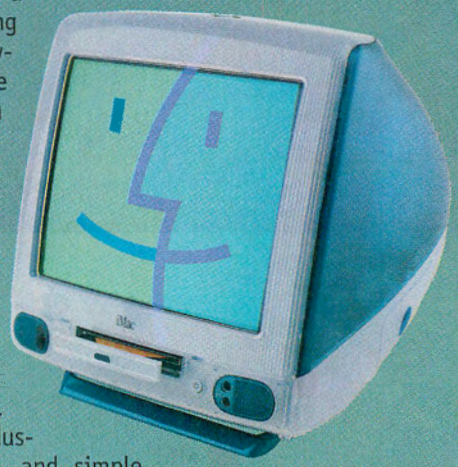
Chiat/Day, working closely with Steve Jobs, succeeded in its goal of grabbing the attention of the masses. People are finally starting to talk about Apple advertising again, if only to ask, "Who the hell is that?"

meet demand can be a balancing act of do-or-die proportions, Apple instituted the build-to-order program to provide some flexibility for choosy customers with specific computing agendas. Apple also made a smart move when it announced the iMac three months in advance of its availability and encouraged people to leave their name and contact information on Apple's Web site if they were interested in preordering. Armed with a realistic gauge of the public's interest in the iMac, Apple hired 400 additional engineers and assembly workers at its Sacramento plant to step up production to meet the demand. When Apple accepted a record 150,000 preorders for the iMac in the first week that consumers were allowed to place them in early August, the company was prepared.

7 Impress the press

When the world started to seem like too nice a place, reporters could always dredge up some gloomy Apple story to call news while Microsoft basked in the glory of its competitor's bad luck. Unfortunately for Microsoft, all that basking led to one bad burn as the press turned its evil eye away from Apple and focused on a certain landmark antitrust case. While Microsoft busied itself with lawyers and depositions, Apple went from enfant terrible to media darling with the splashy introduction of the iMac and continual announcements of record sales and consecutive profits.

6 Blend fashion with function



In what comes as a relief to trend-setting Mac addicts everywhere, Apple has finally come to grips with the fact that you can't hang with the cool kids unless you look the part. The iMac, Apple's latest entry into the consumer market, is sleek, chic, and pleasingly affordable—a welcome parting from the recent past, which spawned boxy, beige models more akin to Wintel machines than Macs.

The iMac's space-age industrial design, powerful parts, and simple setup are winning over Mac addicts and PC users alike. On the iMac's first day in CompUSA, the chain sold more iMacs than it had ever sold of any computer in a single day. ComputerWare, a San Francisco-based, Mac-only dealer, polled 500 shoppers who walked out of its stores carrying iMacs and found that 13 percent of them were replacing PCs. MacMall, a major catalog and Internet source for Mac products, reported $4 million in iMac orders in the product's second week of availability, the most it has ever sold of any computer during its launch. Creative Computer, MacMall's parent company, received so much interest in the iMac from PC users that officials announced Creative Computer would also sell the iMac in its PC Mall and ComputAbility catalogs.

8 Keep your secrets

Promises, promises. We'd be willing to bet that Gil Amelio still boohoos himself to sleep for promising that Apple would be profitable in the second fiscal quarter of '97, only to have it suffer a resounding $708 million loss. But profitability was just one in a string of broken promises and failed expectations, including Copland, OpenDoc, CyberDog, and Rhapsody, that conspired to bring about the end of the Amelio reign at Apple. Jobs hasn't made the same mistake. In order to keep company secrets secret, Jobs doesn't even allow Apple employees to sneeze without his permission, much less sneeze in the presence of a reporter who might tell someone about it. Folks who leak information risk getting fired.

The veil of secrecy is so tightly wrapped that most Apple employees were unaware of the iMac project until it was announced to the public on May 6. Tom Boger, the product manager in charge of the iMac, claims he didn't even tell his wife. Or his mother.

Oops: Jobs kept the iMac plans so secret that even Bill Campbell, CEO of Intuit and a member of Apple's board of directors, didn't know about it. As a result, Intuit canceled plans to make Quicken for the Mac, claiming that Apple wasn't supporting the consumer market. After Jobs finally fessed up to his plans, Intuit reversed its decision.

9 Get 'em while they're young

Apple's shooting to regain its footing in the education market, where it long ago garnered the trust and devotion of today's Mac faithful. Not only has Apple designed a killer G3 Mac that it's selling only to those involved in the education market (now is the time to get in touch with that fifth-grade teacher you found so inspiring—screw the iMac, she can get you Apple's real deal), but it's also showing schools the money. Earlier this year Apple pledged $1 million in network software and training to Los Angeles–area schools and over $1 million in grants to 10 K through 12 schools and universities to support their technology programs. The company also instituted its Power of Ten program: It agreed to credit 10 percent of the pretax purchase price of every computer bought through the program to any qualified public or private K through 12 school in the United States. Five thousand schools promptly registered to reap the benefits.

But the schools aren't the only winners. According to Quality Education Data, a Denver-based market research firm that surveyed the purchasing plans of 5,000 public schools, Macs will account for 38 percent of all new computers ordered for the school year—up 6 percent from last year.

10 Never forget your friends

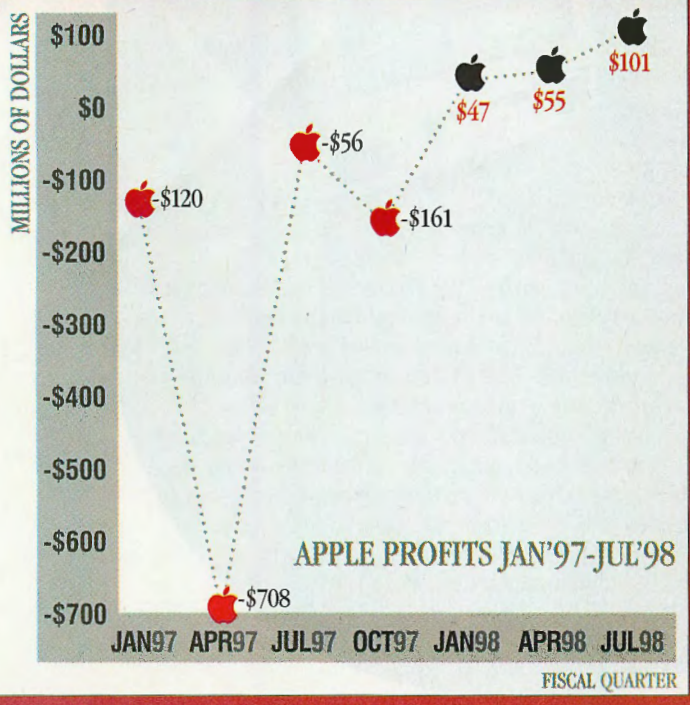
The best thing about Apple's revamped board of directors is that Oracle CEO and official FOS (Friend of Steve) Larry Ellison is on it. He may still spill a few of Jobs's secrets every now and then, but at least he's stopped threatening every year to buy out the company.

11 Less is more

Jobs likes to reminisce about how when he first started as interim CEO, Apple's product line was so complex that even he didn't understand it and wouldn't know what to recommend to a friend. ("Gee, I don't know what to

12 Pump up the profits

Apple may have always had the best of intentions, but it wasn't until the company actually put its money where its mouth was that Apple won back all of its fair-weather friends on Wall Street. Although investors considered the first quarter the company achieved a profit a fluke, they declared the second a strong step in the right direction, and the third consecutive profitable quarter had them investing again. Fidelity Investments, the Boston-based mutual fund giant, gave Apple a big smile and two thumbs up when it bought up millions of company shares. Fidelity raised its stake in Apple to 12.29 percent, or 16.7 million shares, up from the 5.75 percent (7.6 million shares) it held last March, making it the largest Apple shareholder.



Fidelity isn't the only investor that's buying into Apple. Stock prices have more than doubled since last year's lows of $13 and $15 per share, now hanging out in the low 40s. The Mac faithful who bought into Apple when the price was right are smiling all the way to the bank. Here's the breakdown (and recovery) of Apple's bottom line:

- January 15, 1997: First fiscal quarter ending December 27, 1996, resulted in a net loss of $120 million.
- April 16, 1997: Second fiscal quarter ending March 28, 1997, resulted in a net loss of $708 million.
- July 16, 1997: Third fiscal quarter ending June 27, 1997, resulted in a net loss of $56 million.
- October 15, 1997: Fourth fiscal quarter ending September 26, 1997, resulted in a loss of $161 million.
- January 14, 1998: First fiscal quarter ending December 26, 1997, resulted in a net profit of $47 million.
- April 15, 1998: Second fiscal quarter ending March 27, 1998, resulted in a net profit of $55 million; PowerMac G3s accounted for 51 percent of all units sold.
- July 15, 1998: Third fiscal quarter ending June 26, 1998, resulted in a net profit of $101 million.

tell you—they *all* have floppy drives.") So he simplified the line into four models that Apple will continue to improve and refine. Now, instead of blindly sorting through a mass of model numbers, you can choose among four types of products: professional desktop Macs (the Power Mac G3 line), consumer Macs (the iMac), professional PowerBooks (the PowerBook G3), and a soon-to-be-announced consumer portable. Funny, we still don't know which one to recommend—we want them all.

13 Build products efficiently

Refining the product line doesn't just make it easy for Mac-savvy evangelists to make buying recommendations—it also makes it easier for Apple to make money. By staying with one motherboard design, using the inexpensive G3 processor, and cutting production costs in just about every way possible, Apple makes a profit of more than $500 on every machine sold, despite a reduction in prices. Apple's profit margins have risen from 19 to 20 percent in 1997 to about 25 percent for most of 1998, even though it's selling roughly the same number of Macs—for about $300 less per machine.

14 A company is only as good as its employees

Jobs likes to brag that Apple's annual employee attrition rate has dropped from last year's 33 percent to a below-industry average of 15 percent. Of course, after Jobs went on his big firing spree and cleared the company of a lot of dead wood, the pool of people from which those numbers were drawn was much smaller. Still, those who made the cut seem newly inspired under Jobs's highly focused management. It also doesn't hurt that he sweetened the pot with a revised stock incentive plan that repriced employees' worthless options to a more lucrative $13.25 a share. Jobs also improved the cafeteria by hiring a new chef and extending serving hours into the evening.

We've heard from many of Apple's employees that the sun actually seems to shine more brightly over the campus, the grass looks greener, the flowers smell more fragrant, the cafeteria food is tastier, and their stock options are rising quite nicely, thank you very much.

15 Secure more software

More than 460 products have been announced for the Macintosh since the introduction of the iMac. Granted, some products are marginal (shareware collections, for example), but most are full-scale applications. See the PDF file on The Disc for the full list or check out the product database at http://macsoftware.apple.com. Then go out and buy some as a show of support.

16 Corner the colleges

Yale put the Mac back on its list of acceptable computers for Ivy League scholars, Dartmouth recommends that all of its students own one, and the College of Wooster declares the Mac its platform of choice. Three consecutive profitable quarters, a showing of developer support, the convenience of the hip, dorm-size iMac, and the affordable portability

17 Keep up appearances

For Apple's industrial design team, the Mac's ugly-duckling era prior to the return of Jobs was a painful time. Beige boxes had become the norm, towers meant power, and processor speeds were all anyone saw when they looked to buy. Function had entirely replaced form, and the design team was not encouraged to fuss with that formula. All of that changed with the return of Jobs, who worked closely with the design team to create radical changes in the Mac look and feel. The result was the wildly successful iMac, a stunning flat-panel display, and the luxuriously contoured PowerBooks. To get the scoop on how life has changed for the design team, *MacAddict* interviewed Jonathan Ive, Apple's vice president of industrial design. Here's a sampling of what he had to say.

PHOTOS COURTESY OF APPLE COMPUTER, INC., PHOTO BY WILLIAM MERCER MCLEOD

THE INTERVIEW

Us: ***What was it like designing products at Apple before Steve's return?***

Him: Just absolutely frustrating. It was really frustrating because we cared. One of the fantastic things about working with Apple are Apple customers. They are so bloody tenacious. They happen to be fairly creative. They're inspiring and terrorizing at the same time. So it was really frustrating that we weren't delivering products that I think our customers deserved.

Us: ***How have things changed since Steve took over as interim CEO?***

Him: Absolutely fundamentally. It's a strange feeling going to the same physical place of work because it feels so very different....One of the things we really sort of come to realize is that what you ship stands as testament to a set of corporate principles, a culture, a belief, a sense of identity.

Us: ***How did the iMac come about?***

Him: Steve had a very clear sense of what this thing needed to be and he understood our strengths. The team and he started working very closely together right from day one. We knew things needed to be simple. Things got way too big, cumbersome, complex, bloated. There were just some very simple targets we had like getting it small, highly integrated, small footprint, easy to set up...We wanted it to be very friendly and personable.

Us: ***How did you come up with Bondi blue?***

Him: We'd just been doing an incredibly broad exploration of color and materials. It's very difficult to just isolate color as an issue, because you've got color, you've got material, you've got the thickness of the material, you've got the type of material, you've got the texture of the material, you've got what's behind the material. All of those things totally change the color. So color is much more complex than, "Well, it's going to be exactly this shade of blue." You wouldn't believe how difficult and complex it has been to try and control all of those variables. But it was very interesting—this particular blue just naturally evolved and was just naturally one that people felt really comfortable and good about.

Us: ***Do you see future Apple products, like the G3s and the PowerBooks, moving toward the translucent, colorful case designs?***

Him: Well, I know, but I can't really say. You can make some educated guesses in terms of looking at the mouse, keyboard, and the Apple Studio Display. You can see what we've been doing and you get a sense of when we did that.

Us: ***Hmmm.***

of the PowerBooks have swayed schools from the Dark Side. In the case of Dartmouth, a personal visit from Steve Jobs cinched the deal.

18 Sex sells

And so do games. Apple has recommitted itself to the crumbling Mac gaming market by sweet-talking developers, showcasing games and Apple's commitment to them during public speeches by Steve Jobs, and beefing up the hardware specs for all Macs (not just the ones targeting graphic artists). The result: Unreal, Tomb Raider II, StarCraft, MDK, Microsoft Age of Empires, Civilization II, Quest for Glory V: DragonFire, and more.

PHOTO BY AARON LAURER

19 Cut costs at all cost

You can't bail out a sinking ship without first plugging the leaks. In a series of unpopular decisions designed to keep the company afloat financially, Apple killed off money-draining technologies and products (Open-

20 Make products that customers crave

For a while, Apple hit a slump where it made a lot of products that few people liked, much less loved. Fortunately for lonely Mac users, Apple made Macs loveable again with a killer lineup of Power Mac and PowerBook G3s, the iMac, and the rejuvenated Mac OS 8. Apple launched the PowerMac G3 on November 10, 1997, and sold more than it had forecast, making this the most successful product launch in Apple's history...until the iMac debuted in '98 and broke all new sales records.

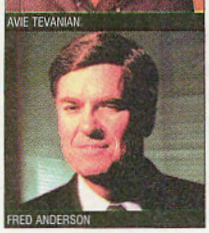
Not to be outdone, the PowerBooks broke records of their own. On May 8, 1998, Apple announced that its online store received a record $1.9 million in orders in a single 24-hour period, driven by sales of the new notebooks. The new PowerBooks have won over even cranky PC enthusiasts like the *Wall Street Journal*'s Walt Mossberg, who proclaimed, "Apple has hit a home run with these new PowerBooks, and that's a good omen for a once-great company that just last year seemed aimless and listless."

PHOTOS COURTESY OF APPLE COMPUTER, INC.

Doc and Newton) and too-close-for-comfort competition (clones). Apple also laid off several hundred people and took a few costly perks out of the employee benefit plan—employees can no longer fly first class on the company dime or take weeks-long sabbaticals. Other less-publicized cutbacks involved downsizing facilities as Apple sold off manufacturing plants and reduced the number of physical buildings the company owns. Thanks to all of the money-saving measures, Apple had $1.99 billion in cash and short-term investments at the end of its third fiscal quarter of 1998, up from $1.23 billion a year ago, and way, way up from the measly $592 million it scrounged up when Gil Amelio came on board in 1996.

JONATHAN RUBINSTEIN

AVIE TEVANIAN



FRED ANDERSON

PHOTOS COURTESY OF APPLE COMPUTER, INC., BY GARY PARKER

21 Mind who's minding the store

Former Next employees have popped up at Apple like old relatives at a family reunion. All cab-stealing aside, we're glad to see them. When Jobs started making his system-level changes he needed people he could trust to carry out his royal commands. His solution was to bring in old friends Jonathan Rubinstein and Avie Tevanian and put them in charge of hardware and software. He also brought in top-notch managers to head up marketing and sales, and he was smart enough to hang on to Apple's executive vice president and CFO Fred Anderson. With the company running smoothly under his crack management team, Jobs has the time he needs to "think different." And should Jobs decide to leave Apple, the company can continue to run smoothly under its current strong management team.

22 When the going gets tough, go shopping

To give credit where credit is due, Apple probably wouldn't be making a profit today if Gil Amelio hadn't maxed out his corporate credit card to buy out Next and all that came with it, namely Steve Jobs, Rhapsody, and some top-notch managers. In further attempts to streamline development costs, Apple cut out all research and development funding except for key technologies including QuickTime and the Mac OS. Now, when the company needs innovative additions to its software, it just buys what it needs and gets the best for less. For example, in May Apple acquired an unspecified technology from Macromedia (solid rumors say it's Final Cut—Macromedia's long-planned rival to Adobe's Premiere video-editing software) to enhance QuickTime. Not only did Apple get the technology, but it also got about 50 engineers, all of whom are well versed in video technology—a key area for the company. Apple has also licensed QDesign Corporation's digital audio compression technology, Qualcomm's PureVoice voice audio technology, and Sorenson Video's new video compression technology—all to make QuickTime 3 the best it can be.

23 Keep it simple

As the Internet becomes a household word, it should become as easy to access as a household appliance. Take a toaster, for instance. Plug it in, turn it on, and boom, you've got toast. The iMac, coupled with Mac OS 8.1, is just that simple: Plug it in, turn it on, and boom, you're toast. Uhhh, what? OK, so maybe that's not the best analogy. The point is that Apple's gone back to making computers easy to use for everyone.

24 Dare to be different

Fans fumed when Apple blanched its logo from its traditional rainbow stripes to a translucent white, but like it or not, growth means change. In the case of the logo, it desperately needed a makeover to look good with Apple's new colorful translucent designs, already seen in the iMac, the flat-panel display, and the old eMate of yore. According to Apple vice president of industrial design Jonathan Ive, the striped logo brightened up the beige boxes but clashed with Apple's new colored plastics. The designers also wanted to make the logo bigger (as it is on the PowerBooks), and the bigger they made the striped logo, the worse it looked. Now quit complaining.

25 Don't let the millennium bug you

Many computers can't handle dates beyond the year 1999 because of a shortsighted, two-digit date format that looks at the 00 in the year 2000 and thinks it's 1900 all over again. Fortunately, the year 2000 is not a problem for Mac users, who can work nonstop until the year 29,940—feel free to take a few breaks if you start feeling worn out.

26 Embrace the enemy

If you can't beat 'em, give 'em a big hug and promise to make Internet Explorer your browser of choice in exchange for $150 million, Microsoft Office for the Mac, and other odds and ends too odd to reveal.

27 Perfect your timing

Focus on selling games during the holidays just when kids are longing for fresh fruits and clean, white socks? Launch the iMac in time for the back-to-school season when the last thing on the minds of teachers and students is what computer to take to class? Will this company never get it right?

28 Read *MacAddict*

Well, really, without us, where would Apple be?

29 Don't let anyone pull a faster one on you

No one can accuse the Mac of being last in a processor race—*Byte* magazine proclaimed Apple's Power Mac G3s faster than the fastest Pentium. In a real-life case of the turtle and the hare, the pokey old Mac got a speed boost while the Wintel world was dancing around the lab in bunny suits. Even the iMac, Apple's low-cost consumer model, outperforms high-priced Pentiums, according to *Byte*'s benchmarks.

Now that Apple is running ahead of the game, it's determined not to lose any ground. Motorola's upcoming AltiVec technology, which is similar to MMX on the Wintel side but twice as powerful, will greatly speed up the signal processing of the PowerPC chips—a boon for real-time video. In addition, a whole new copper chip looms on the horizon that could turn your little Mac into a supercomputer without so much as an unfortunate accident in the lab to blame. Spider-Man would be so jealous.

30 Build the brand

We find it hard to believe that anyone buys Gap jeans because of their higher-quality denim. And we highly doubt that most consumers of Nike running shoes have done any serious research into the actual efficacy of its full-length Zoom Air cushioning. Most consumers wouldn't know what to do with that information if they had it, so they make their purchasing decisions based on their level of comfort with the brand name.

In an attempt to lure new computer users who are unfamiliar with the technical jargon that so captivates hard-core nerds, Apple quit pushing its specs and started promoting its brand. The average Joe and Mindy might not understand the value of fast processor speeds, copper chips, and backside cache, but unless they've been living under a rock their entire lives, they'll recognize the Apple logo—new colors and all.

31 Maintain good developer relations

For a while, Apple's biggest problem wasn't its unhappy customers, but its disillusioned developers. Many developers were feeling ignored by Apple and uncertain about the company's future, so they threatened to quit making software for the Mac. Apple won back their support by giving them what they wanted—closer company ties and a simplified, online support program. Apple began to offer basic online support for all developers, while heavily courting the top developers in each category to secure public support from the big marquee names, such as Adobe, Macromedia, and Microsoft.

Even better, Apple has started listening to developers more than in the past. For example, when Apple showed prototypes of a G3 Mac to developers, the company had upped the bus speed to 66MHz. However, developers of certain types of hardware, such as video boards, squawked—the higher bus speed broke the hardware. Apple relented and made the bus speed adjustable.

32 Make passion its own reward

Although Jobs raked in a tidy sum of money when Apple bought out Next, he's not making a dime as interim CEO. Not only does this provide inspiration for hard-working employees, but it doesn't squeeze the bot-

33 Keep up home page improvement

Apple's Web site used to be a mere waste of cyberspace—too confusing to be of any use to anyone. Taking a clue from embittered browsers, the company revamped its site to make it useful, clean, and easy to navigate. The site looks so much better that it ranked sixth in a list of the top ten Silicon Valley Web sites compiled by Shelley Taylor & Associates, a Silicon Valley management consulting firm that performed a study on the Web presence of 50 top technology companies in Silicon Valley last August. The firm, which had previously examined 100 major corporate Web sites, judged the high-tech sites on the ease with which browsers could contact the company, content, navigation, and the availability of investment and employment information.

tom line, which already took a beating with the last CEO's multimillion dollar salary.

34 Maintain industry standards

In order for Apple to sell Macs at competitive prices, the company was forced to adopt certain industry-standard parts and technologies. IDE drives, which are found in new Power Macs (and most PCs), are cheaper than SCSI drives because they're so abundant. USB, the new method for hooking up peripherals to the iMac, replaces serial and ADB ports because USB is the emerging industry standard on the Wintel side. Hardware developers who already make devices for PCs have only to write Mac drivers to run the same hardware on a Mac. Although it hurts not to be able to use that SCSI scanner you saved up all month to buy, in the long run you'll have more devices to choose from than if Apple had taken the path less traveled, and you'll have saved enough money on the Mac itself to afford them.

35 Create your own industry standards

Of course, there's no need to sacrifice quality for quantity—if nobody else is going to do the job right, do it yourself. QuickTime 3 hit a million Mac and Windows users less than two months after it was released and won numerous awards. One of Apple's few technologies to survive the budget cuts, it has become the industry standard for digital video because it is powerful, multiplatform, easy to use, and free (unless you want the Pro version, which costs a measly $29.99). It has also been chosen as the file format standard for the International Organization for Standardization MPEG-4 Intermedia specification. This is a big deal—finally an Apple technology has been chosen to drive a key industrywide technology and a high-value product line. By controlling the technology that is central to MPEG-4, Apple in essence controls MPEG-4 itself as well as the entire industry's use of it. This is quite a coup for Apple, especially in light of the fact that Microsoft has a competing video technology.

36 Make products that developers love

Although everyone loved Mac OS 8 for its stability and improved appearance, developers weren't wild about Rhapsody. No one was really looking forward to rewriting the bulk of their applications just to run on an unproven OS that had no installed base. Apple's new operating system was headed for a flop the size of Copland, until Apple came up with the ingenious Mac OS X—a glorious melding of the two operating systems (Mac OS and Rhapsody). Now, under Apple's new Carbon process, developers need only rewrite a few lines of code to take advantage of OS X's long-awaited buzzword features such as multitasking and protected memory. Key developers including Adobe, Macromedia, and Microsoft have already declared their desire to become Carbon ready. Apple's hoping the rest of the developers will eagerly follow their lead. We can't imagine why they wouldn't.

37 Create a buzz

In today's market, even the best products may not succeed without the right buzz. Jobs has created a top-notch buzz for the iMac by focusing most of Apple's marketing initiative around it. Everything from the surprise introduction of the iMac to splashy eight-page ads in major consumer publications that showcased the iMac's Jetsons-style design were planned to create a buzz around the product. It didn't hurt a bit that the iMac looks different than any product before it, and acts differently as well.

38 Practice spin control

Before Jobs came onboard, Apple's name had become synonymous with failure. Jobs, however, managed to keep the press focused on the positive steps Apple was taking. Before Jobs, magazine covers played up Apple as the fallen son—*Wired* ran a "Pray" cover with religious overtones, and a major business newsweekly magazine ran articles about the dark days of Apple. Jobs managed to make sure the press understood exactly what Apple was attempting and why. Even more important, Jobs let the press know exactly how successful the company had been in fulfilling each of it promises. When the press asked questions that did not relate to the issue at hand, Jobs charmingly brought them back to the point, refusing to become distracted.

39 Perform charismatic speeches

If you've ever heard Jobs speak in person, then you'll understand the definition of the word "charisma." Jobs has an uncanny knack for saying things that should offend you but that, because of the way he says them, make you want to repent and follow him instead. We *believe*, Steve! We *believe*!

Senior editor Nikki Echler claims that her Magic 8 Ball now says "SIGNS POINT TO YES," whatever that means.

40 Sell it online

The Apple Store, which opened its online doors in November 1997, quickly racked up over $12 million in orders in its first 30 days of operation. Mac addicts leapt at the chance to finally build their Macs to order, fussing over every little detail from processor speed to the size of their hard drives. The program was such a success that Apple extended the build-to-order option to its resellers. Unfortunately, you can't order what it hasn't yet invented, so all requests for 500MHz machines have yet to be filled.

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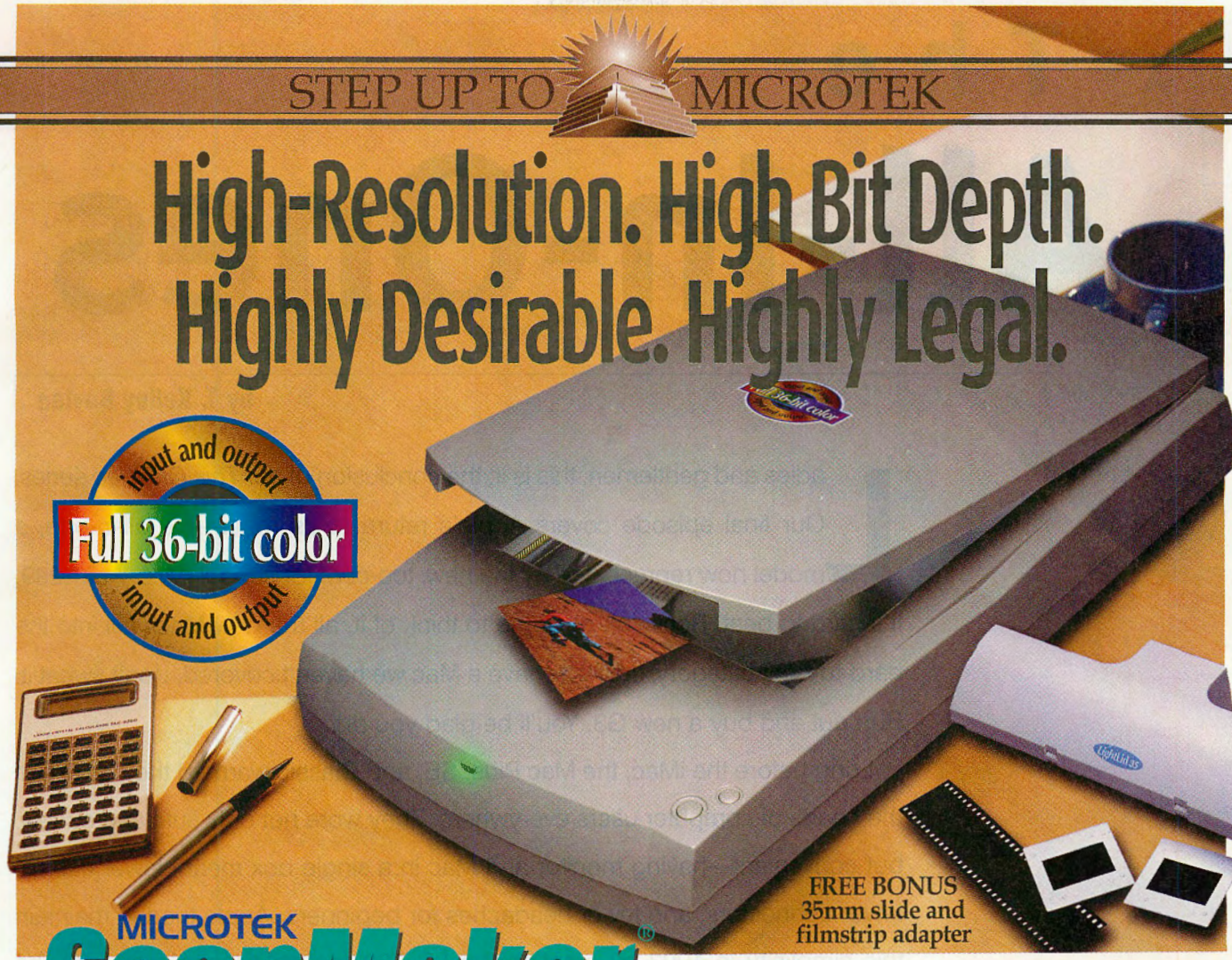
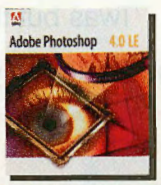


MICROTEK ScanMaker® X6EL

FEATURES

Did you ever think you could have this much fun with a scanner? Don't worry it's legal. With Microtek's new legal-size, high-resolution *ScanMaker® X6EL* color scanner you scan a document or photo up to 8.5" x 14" in one single pass. The 36-bit ScanMaker X6EL is capable of delivering more image data for scans with richer, smoother tonal values than you can get from comparably priced 24-bit and 30-bit scanners. It even includes the *LightLid™ 35*, a 35mm slide/filmstrip adapter for scanning slides.

The ScanMaker X6EL's new push-button design calls up Microtek's new *ScanSuite™* utility. ScanSuite's presets let you quickly scan photos or documents and route them to your printer for a quick copy, your fax or email software, or directly to *Adobe Photoshop LE* (included), *Caere OmniPage Limited Edition* OCR (included), or any favorite application you have on your computer. To access even more image controls and effects, ScanSuite also lets you call up Microtek's award-winning *ScanWizard™* scanning software.



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The All-In-Ones

by T. Kelley Boylan

Find the Apple Spec Database and Mac-Check on The Disc.

Ladies and gentlemen, this is it, the conclusion of our *This Old Mac* series. Our final episode covers Apple's return to its roots—the all-in-one, a model now represented by the new, too-cool-for-school iMac. At $1,299, it's hard to beat. Really hard. Come to think of it, all the new Macs fall into the hard-to-beat category, so if you have a Mac we haven't covered, don't sweat it. Run out and buy a new G3. You'll be glad you did.

Long before the iMac, the Mac Plus, SE, and Classic warmed the cockles of the hearts of computer users everywhere. They were not only cute and cuddly, but convenient—having monitor and Mac in a single box meant fewer cables, fewer connectors, and fewer headaches for beginners. Apple tried to maintain this simplicity in 1993 by creating the LC 520 (not to be confused with the PowerBook 520), an all-in-one with a 25MHz 68030 processor, 4MB to 36MB of RAM, LocalTalk, and a 640 by 480 display that handled 256 lovely colors (expandable to thousands).

'Twas but the beginning of a population explosion. Apple's lust for life soon gave the lowly LC 520 ten siblings—the LC/Performa 550, 560, 575, 577, 578, 580, 580CD, 5200CD, 5215CD, and 5300CD (don't confuse the latter with the PowerBook 5300).

Many of these models are nearly identical—differing only in clock speeds, bundled software, or what outlet sold them. But wait, there's more! What looks like one machine may be another. Open your 550 or 560 and check the markings on the innards; they might say it's a 520. Maybe it is, maybe it isn't. According to Apple, you can run the utility MacCheck to verify whether the clock speed is 25MHz (the 520) or 33MHz (the 550 or 560).

The All-In-One Who's Who

In an awkward attempt to expand the market, Apple created many versions of the same machine using different names and model numbers. The company marketed the same CPU in a dozen different variations, subtly changing software packages, hardware configurations, and prices, thereby creating a plethora of choices. The result was confusion. To get a grip on who's sitting where on the LC family tree, check out the following chart. Though it doesn't include all the model numbers, it does cover the major players.

Mac Model	CPU	FPU	RAM	Display	Colors	Expansion Slots
520	25MHz 68030	Optional	4MB-36MB	14 inch	8 bit	LC
550	33MHz 68030	Optional	4MB-36MB	14 inch	8 bit	LC
560	33MHz 68030	Optional	4MB-36MB	14 inch	8 bit	LC
575	33MHz 68LC040	None	4MB-36MB	14 inch	8 bit	LC, comm
577	33MHz 68LC040	None	5MB-36MB	14 inch	8 bit	LC, comm
578	33MHz 68LC040	None	8MB-36MB	14 inch	8 bit	LC, comm
580	33MHz 68LC040	None	8MB-52MB	14 inch	8 bit	LC, comm, video in/out
580CD	33MHz 68LC040	None	8MB-52MB	14 inch	8 bit	LC, comm, video in/out
5200CD	75MHz PPC 603	Built-in	8MB-64MB	15 inch	16 bit	LC, comm, video in/out
5215CD	75MHz PPC 603	Built-in	8MB-64MB	15 inch	16 bit	LC, comm, video in/out
5300CD	100MHz PPC 603	Built-in	16MB-64MB	15 inch	16 bit	LC, comm, video in/out

Getting Down to Work

RAM

The basic RAM each model includes, ranging from 4MB to 16MB, doesn't go far these days. First and foremost, bump up the RAM. You'll have either one or two SIMM slots, depending on your model. You could buy small SIMMs to save money—1MB, 2MB, 4MB, or 8MB—but given how little RAM costs, go for the gold and buy 16MB or 32MB.

The RAM must have 72 pins and must be at least 80ns or faster for each model in the 500 and 5000 series. You can get RAM easily from a variety of outlets, including Newer Technology—there's a list of resellers at that company's Web site, http://www.newerram.com/dist_mo.html.

VRAM

After you've bought all the RAM you can buy, go back to the store and buy more VRAM. In the 520, 550, and 560, installing an additional 256K of VRAM allows thousands of colors on the 14-inch monitor. It costs about the same as standard RAM and is available at all the same sources, from MacMall (http://www.macmall.com) to the Chip Merchant (http://www.thechipmerchant.com).

In the 575, 577, and 578, you'll need to remove the two 256K VRAM SIMMs and add a pair of 512K VRAM SIMMs to get the same effect. It's worth it. Graphics, Web pages, and QuickTime video all look far, far better. In fact, Apple noticed how much better, so the VRAM is already upgraded on the 580, 580CD, 5200CD, 5215CD, and 5300CD.

The LC Slot

The all-in-ones lack NuBus slots, but they do all have an LC slot, and almost the same set of NuBus cards is available as LC cards. Sadly, the year's best card won't fit—G3 upgrades have a different connector and pin count, and just won't work. The good news is that you *can* use the slot to hook up an extra display or go live via Ethernet.

Display Cards

The 500-series' built-in 14-inch monitor can seem limiting. Fortunately, you can install an LC video card for double-display nirvana with a second, bigger monitor. That adapter won't fit in any newer Mac, so try not to spend more than $100 on it. But a monitor is a monitor, so if you're saving for a new G3, as you no doubt are, buy as much display as the card will support. When the new Mac arrives, you'll already have a monitor.

If you're looking for a display card for the 030 and 040 machines, you'll have to do some digging. MicroConversions used to make the Model 1724PD. It's discontinued,

Hardware Sources

Used Hardware Contact several vendors when you shop, and ask about warranties and returns just in case. This list isn't comprehensive, but it's a good place to start.

Computer Exchange
800-304-4639
http://www.mistermac.com

DataTech Remarketing
800-281-3661
http://www.datatech-rmkt.com

GE Capital
800-431-7716
http://www.ge.com/capital/commequip/es

Hawke Business Systems
800-875-2610
http://www.machawke.com

MacResQ
510-689-9488
http://www.macresq.com

Pre-Owned Electronics
800-274-5343
http://sourcedata.com/500/000411.html

Sun Remarketing
800-821-3221
http://www.sunrem.com

Hardware Sources

Displays

Formac
+44-181-533-24-89
http://www.formac.com/english/products/accelerators/pro-legend-pds.html

Power R
800-729-6970

Accelerators and Caches

Daystar
770-614-0070
http://www.daystar.com

The L2 Cache Company
800-527-9772
http://www.mindspring.com/~l2co

Mac Gurus
302-778-0420 or 800-775-3726
http://www.macgurus.com

MicroMac
800-600-6227
http://www.micromac.com/products/fpus.html

Newer Technology
800-678-3726
http://www.newertech.com

Networking

Asanté
408-435-8388
http://www.asante.com/Products/macconi.html

c|net Shopper.com
http://www.shopper.com/prdct/457/38.html

Dayna
801-269-7200
http://www.dayna.com

Innovative Systems
800-358-6348
http://www.innovative-systems.ns.ca/steve

The Mate Company
888-999-9984
http://www.tmcscsi.com

Farallon/Netopia
510-814-5000
http://www.farallon.com

Modems

Global Village
561-241-8088
http://www.globalvillag.com/support/tpplatcs.html

Parts

ICN
800-660-7769
http://www.icni.com

Software Sources

CharisMac Engineering
800-487-4420
http://www.charismac.com

Dantz Development
925-253-3000
http://www.dantz.com

FWB
650-482-4800
http://www.fwb.com

Symantec
800-441-7234
http://www.symantec.com

Cyberian Outpost
800-856-9800
http://www.outpost.com

Repair Services

DT&T Macintosh Services
800-622-7977
http://www.dttservice.com

of course, but ask used-hardware vendors; you never know what their dusty back shelves might hold. The 520 and 550, however, have their own special display gadgetry courtesy of Power R, which makes the Presenter 520. It installs on the logic board, around the video chip, and has connectors for multisync Apple and IBM monitors.

If you lust for more viewable space on your 5000-series Mac, the ProLegend PDS by Formac lets you hook up additional monitors up to 21 inches in size. Retail outlets for this United Kingdom–based company aren't easy to come by, so contact the maker for pricing and sales details.

Networking

Most all-in-ones lack built-in Ethernet, but they all have an LC slot, which fits Ethernet cards nicely. As of this writing, network cards were available from Asanté, c|net's Shopper.com, Dayna, Farallon, Innovative Systems, and the Mate Company. If none of these has any cards on hand, ask your favorite used-hardware vendor for Farallon's EtherMac LC/PDS Card or Dayna's Blue Streak PDS. Remember, the market has lain idle for a few years, so before you buy be sure there's a return policy—resellers may not know what they're selling.

Token Ring networking cards also exist, but are a bit harder to find. We couldn't locate a source that had more than one or two, so your best bet is to search Yahoo or AltaVista for "LC PDS." Supply and demand makes for radical daily changes.

The Comm Slot

AppleTalk is, of course, built in. Ethernet is not. But never fear—the communications slot comes to the rescue. The comm slot went into every all-in-one from the 575 up, giving each model Ethernet and/or modem connectivity and freeing up the LC slot. The comm slot didn't last long at Apple, fading away shortly after the 5200CD's release, but it gives you a choice of 10BaseT, Thinnet, or Farallon's EtherWave for Ethernet access. (EtherWave is darned handy for setting up a hubless network.) For comm slot Ethernet cards, check the card suppliers that are listed above.

The comm slot can also hold a modem, and in the 5200CD and higher models you can upgrade said modem all the way to 28.8 kbps. Global Village's TelePort Platinum, Comm Slot Edition (version 1.511), does the trick. (The company offers the modem and updater directly.) For $200 to $300 you get a modem *plus* fax and speakerphone.

If you crave 56-kbps throughput, you'll have to invest in an external model. A Mac with a comm slot can handle an internal modem, and any Mac handles an external. However, if you already have an internal and want to use an external, remove the internal one. Internal and external modems don't play well together.

Drives

The all-in-ones have external SCSI connectors, which means you can just plug in an

external CD-ROM drive, extra hard drive, scanner, or any other SCSI peripheral and start playing. At most, you might have to set the SCSI ID and/or buy driver software. Each SCSI gadget must have its own SCSI ID, so if the Mac won't boot after you add a device, check the ID. (Internal CD-ROMs are usually ID 3.) For driver software, both CharisMac's Anubis CD driver package and CD-ROM ToolKit by FWB do the trick.

Not every all-in-one has an internal SCSI drive. From the 580 on up, they use IDE drives, and that means you can't use old drive-formatting software. Be sure to use the latest release of any drive-formatting software; that is, Apple's HD SC Setup, FWB's Hard Disk Toolkit, CharisMac's Anubis, and so forth. It's not just for the sake of the IDE drive, but also because newer system software requires it.

Processor Upgrades

Upgrades exist all the way from 030 to PowerPC. The real question is whether it's worth the money. If you have a source for really cheap parts, go for it, but try not to spend more than $100 on any single upgrade. You can buy a complete, used PowerPC system for $600 or $700 these days. Just check out our list of used-hardware vendors or flip through the back pages of *MacAddict*.

The 520, 550, and 560 are 68030 machines and can jump to 040 via a motherboard swap. Pull out the 030 motherboard, put in a 575's 68040 motherboard (part number M2479LL/A), and you have yourself an 040 Mac. Finding that motherboard is not always easy, but try Innovative Computer & Networking (ICN), where you'll find everything from cables to bezels to RAM.

Warning: Pulling a motherboard means pulling the machine apart, which is potentially dangerous. Close contact with a monitor's internal organs can give you a shock, and we mean that in the most life-threatening sense. Be careful. Better yet, if you're not intimate with tearing apart all-in-one Macs, have a professional do it.

The Power Macintosh Upgrade Card (part number M2843LL/A) turns your old 68040—575, 577, 578, 580, or 580CD—into a PowerPC! Well, a slow one anyway. Combine that with the Macintosh Processor Upgrade, which goes on the motherboard in the processor socket, and you'll double your clock speed. DayStar's PowerCard 601 also revs up your processor with speeds maxing out at 100MHz. (DayStar makes a slower version, but why bother? Go for the 100MHz model.) Both Apple and DayStar cards are discontinued, so hunt the Internet, post in your local for-sale newsgroup, and keep an eye on comp.sys.mac.wanted.

Floating-Point Units

Quite a few all-in-ones lack an FPU. Big rendering and graphics apps, a few accounting packages, and some games require an FPU, and if you don't have one they won't run. Given the relative speed of an 030 or 040, you probably don't want to run really big applications anyway, but the fix is cheap.

First and foremost, buy an FPU; it's optional on the 520, 550, 560, and 575. You can find them at MicroMac and they'll run you anywhere from $40 to just over $100.

An FPU is not even an option on the 577, 578, 580, or 580CD, but there's still a fix. John Neil's SoftFPU lets the needy apps run, if a bit slowly. It's available at John Neil & Associates' Web page (http://www.jna.com), among other sites. SoftFPU emulates the real FPU in software, and software's not as fast as hardware; hence the slowdown. Some apps don't really use the FPU but merely check for it when they start up, so your slowdown may be negligible.

System Software

Apple finally outgrew the 030 machines with Mac OS 8, so if you have a 520, 550, or 560, stick with OS 7.6.1. It's the most recent, most effective system prior to 8.0. If you have anything bigger than a 575, take your pick—Mac OS 8, 8.1, or 7.6.1. Slower systems may drag a bit with Mac OS 8, a slowdown that 8.1 fixed, so we recommend the latest, greatest version if you have room for it.

The easy choice is plenty of RAM and new system software. If, however, you prefer an older, slimmer version of System 7, you'll need an enabler. What's an enabler? Apple tried to simplify system software upgrades by making model-specific enabler files for each new machine. The result was rather messy. Check out the chart at the bottom to make sense of the mess.

Software

Practically any software works on the older 030 and 040 models, as long as it's not PowerPC-only—Microsoft Office 4.2.1, Adobe Photoshop, ClarisWorks, you name it. If any software requires a PowerPC, all but the oldest all-in-ones are upgradable, and newer models such as the 5200CD have PowerPC processors that can handle just about anything on the market (even if they do move slowly).

Utilities

Symantec's Norton Utilities 3.2.x is just dandy on all the LCs. You should use Norton Utilities to keep your drive defragmented and error free. For backing up your hard drive, use Retrospect from Dantz Development. Believe it or not, Symantec's long-discontinued MacTools 4.x works with system software versions through 8.1, but not with HFS+. Many prefer it over Norton for its more mature and elegant interface.

T. Kelley Boylan is a Mac system administrator, Mac trainer, and Mac author living in Chicago. He lives happily with five Macs at home and more than 50 at work, spending time apart from them only when absolutely necessary...and usually taking at least one or two along anyway. Just in case.

Mystery of Enablers Unraveled

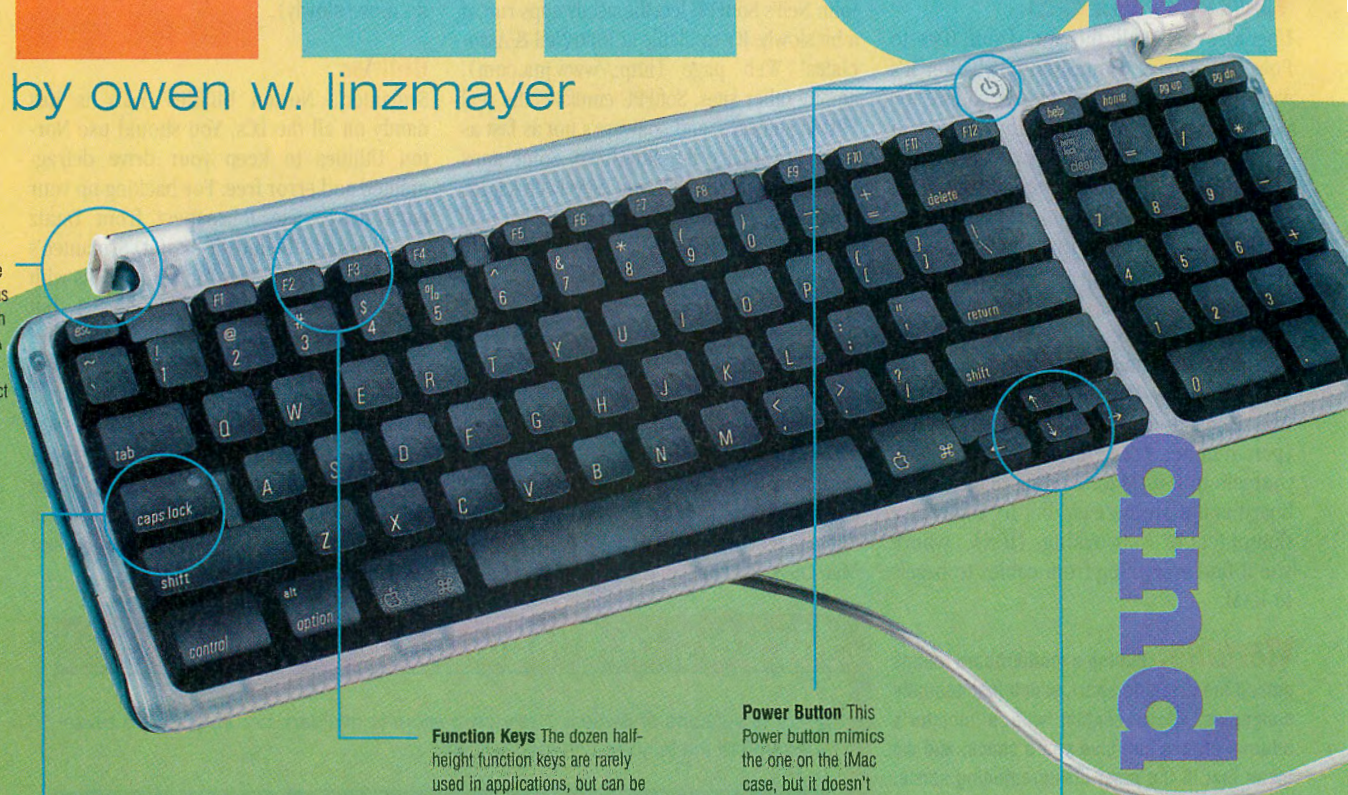
Some versions of System 7 rely on custom-fit enablers to run. Here we reveal some of the intricate codependencies.

Mac Model	Enabler Number	Version	Minimum System Required
Macintosh LC 520	System Enabler 403	1.0	7.1
Macintosh LC 550	System Enabler 403	1.0.2	7.1
Macintosh LC 575	System Enabler 065	1.1	7.1
Macintosh LC 5200CD	System Enabler 406	1.0	7.5
Macintosh LC 5300CD	System Enabler 406	1.0	7.5

Unless you've been sequestered in an independent council's grand jury for the last few months, you've no doubt been hit between the eyes with the two-by-four that is Apple's $100 million advertising campaign for the iMac. Whether you've already succumbed to the lure of Apple's $1,299 reentry into the consumer marketplace, or are simply intrigued by all it has to offer, join us as we dissect the iMac, inside and out, and reveal some secrets along the way.

iMac inside and out

by owen w. linzmayer



USB Ports The keyboard acts as a USB hub, with two USB type A ports to which you can connect the mouse or other USB peripherals.

Caps Lock LED There's an LED inside the Caps Lock key that glows when engaged.

Function Keys The dozen half-height function keys are rarely used in applications, but can be customized with a macro utility such as CE Software's QuicKeys (800-523-7638 or 515-221-1801, http://www.cesoft.com).

Power Button This Power button mimics the one on the iMac case, but it doesn't have an interior light.

Cursor Keys The four cursor keys are arranged in the typical inverted-T configuration, but their small size makes them difficult to get used to.

photography by aaron lauer

Color Display The built-in 15-inch diagonal display (13.8-inch viewable) has a 0.28mm dot pitch. It displays thousands of colors (16-bit) at up to 1,024 by 768 pixels with a 75Hz refresh rate. If you need millions of colors (24-bit), drop the resolution to 800 by 600 pixels (95Hz) or 640 by 480 pixels (117Hz), or add video memory to achieve a maximum of millions of colors in all three resolutions. The high refresh rates result in a rock-solid image with no flicker. Brightness and geometry are controlled via the Monitors & Sound control panel.

Microphone The unobtrusive single-channel microphone centered above the monitor doesn't do justice to the iMac's 16-bit CD-quality stereo input capability. For highest quality recordings, use a dedicated microphone plugged into the sound input port on the side. At present, the iMac doesn't support speech recognition because its sound input is fixed at 44.100KHz and PlainTalk requires half that. Apple is working on a free fix, which it will post at http://www.apple.com/speech.

Expansion Bay Door All of the iMac's expansion capabilities are hidden behind the expansion bay door, which has a small finger hole in the middle for easy opening. Contrary to many people's first impulse, you're not supposed to route the USB, phone line, and other cables through the finger hole; they fit in the openings at either side of the door hinge.

Infrared Window The 4-Mbps Infrared window allows you to beam data to other IrDA (Infrared Data Association) devices such as personal digital assistants, PowerBooks, and printers at a maximum distance of up to 3 feet.

CD-ROM Drive The tray of the 24X ATAPI CD-ROM drive doesn't automatically slide all the way out when you press its button. It mechanically pops out only an inch, so you must manually pull it out further to insert or remove discs. The drive generates a lot of noise when accessing data discs at high rotational speeds, but is perfectly silent when playing audio discs. This multiread drive can read standard CD-ROMs, as well as recordable and rewritable discs that you may have burned on other drives.

Power Button The Power button glows green when the computer is on, amber during Sleep mode, and dark when off. Using the Energy Saver control panel, you can schedule the iMac to turn on or off automatically as desired.

Flip-Out Foot Leave this foot extended to tilt up the iMac slightly for an improved viewing angle, or fold it out of the way for a flat bottom if you want to place the iMac on its own stand.

Headphone Jacks When headphones are plugged into either of the twin headphone jacks, sound is routed away from the internal speakers and into the headphones, allowing two users to bask in an audio assault without disturbing others in the vicinity (great for classroom settings or after-hours gaming tournaments). Audio CDs, which sound thin coming from the small built-in speakers, sound great with a decent pair of headphones.

getting inside its head: 13-step guide to enhancing your memory

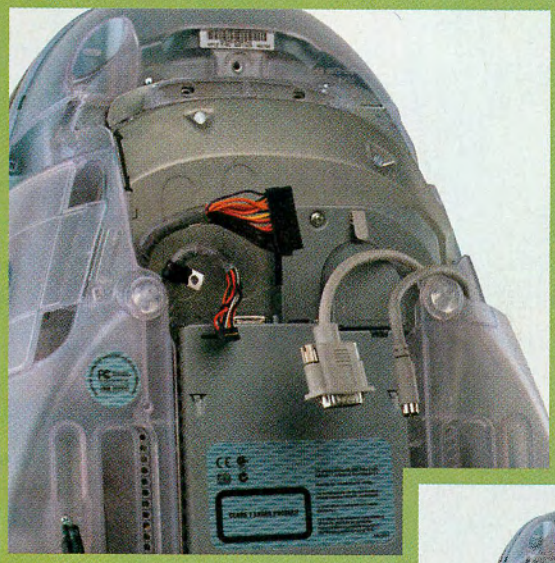
In its basic configuration, the iMac comes with 32MB of RAM. With nothing more than Internet Explorer running under Mac OS 8.1, it doesn't take long to bump into "not enough memory" error messages. For this reason, we strongly recommend that all users immediately augment the iMac's memory to at least 64MB. While you're at it, you might as well bump up the video memory to its maximum, too—if you have the cash.

Unlike the original Mac, which required special tools to open (remember the Mac Cracker and long-handled Torx wrenches?), getting inside the iMac takes only Phillips and flathead screwdrivers. By carefully following these instructions, most brave-hearted souls can handle adding memory to an iMac, but if you're even the least bit apprehensive, there's no shame in paying an Apple-certified technician to shoulder the burden.

quick 'n' dirty

1 Power down the iMac, remove the cables, then turn the iMac facedown on a towel.

2 Remove the screw at the iMac's end, then tugging on the small handle, gently loosen the white plastic base.



3 Unplug the four cables before you pull out the motherboard housing. Since each cable will only plug into one socket in the correct orientation, you don't have to worry about remembering which cable plugs in where.

Fan: This small fan keeps the motherboard cool by circulating air inside the iMac. It's pretty quiet, but continues to run and hum slightly even when the iMac is in Sleep mode.

4 Once you've removed the cables, snap off the metal housing above the processor card and install your RAM in the empty RAM slot.

(then read the directions)

1 Turn off the computer, unplug all cables, then place the iMac facedown on a towel.

2 Remove the single screw on the bottom of the unit, then gently pull off part of the white plastic base by tugging on the handle. After the sickening sound of plastic snaps coming undone, the bottom pops off and can be set aside.

3 Before you can extract the motherboard housing, you need to unplug four cables. Don't worry about remembering how the cables plug in. Each is keyed so that it only plugs into the correct socket in the correct orientation.

4 The mini-DIN cable (marked "Not a Serial Port") pulls out of its slot easily.

5 Using a flathead screwdriver, completely loosen the thumbscrews of the DB-15 video connector, then unplug the cable.

6 Remove the screw holding the leftmost cable in place, then gently tug on the cable until it comes loose.

7 To remove the final cable, you must first press the release latch in the middle of the connector.

8 With all cables unplugged, remove the two Phillips screws in the clear plastic handle, then pull the motherboard housing up and out of the chassis.

9 Snap off the metal housing from above the processor card to expose the empty RAM slot (there's another slot on the bottom of the card that comes with 32MB already installed).

10 Taking care to hold the RAM module by its edges as you would a photo, insert the additional memory into the empty slot (it's keyed so the module can only fit in the correct orientation), then press down until it snaps firmly into place.

11 Replace the processor card's metal housing.

12 As you did with the RAM module, insert the additional video memory module into its empty slot.

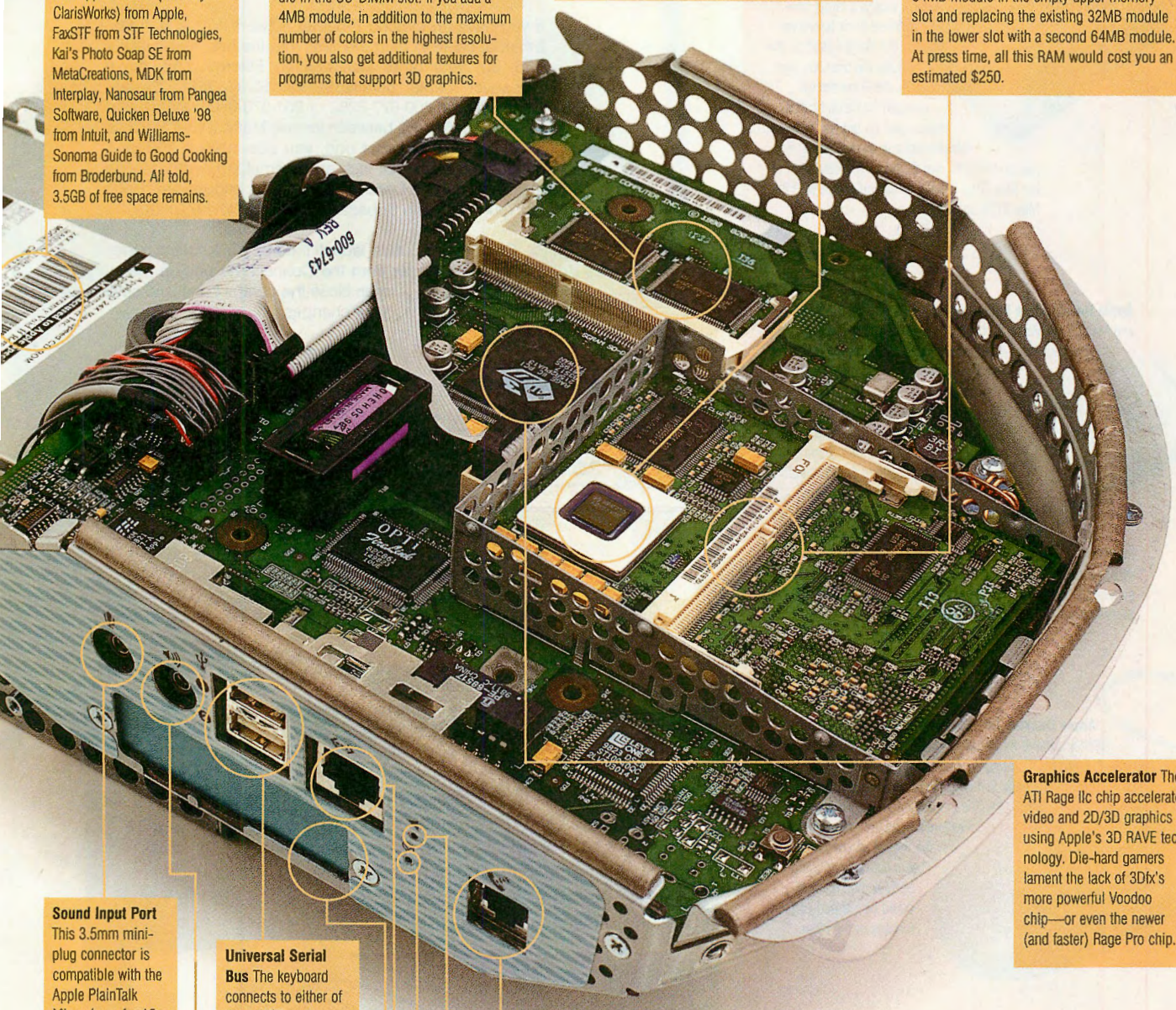
13 Slide the motherboard housing back into place, reconnect the four cables, replace the screws, and pop the bottom back on before applying power.

Hard Drive Hidden below the CD-ROM drive, the 4GB IDE hard drive is formatted with Mac OS Extended Format, a potential problem for older disk utilities that don't yet support HFS+. Mac OS 8.1 comes preinstalled, though the iMac will run Mac OS 8.5. The iMac also ships with AppleWorks 5 (formerly ClarisWorks) from Apple, FaxSTF from STF Technologies, Kai's Photo Soap SE from MetaCreations, MDK from Interplay, Nanosaur from Pangea Software, Quicken Deluxe '98 from Intuit, and Williams-Sonoma Guide to Good Cooking from Broderbund. All told, 3.5GB of free space remains.

Video Memory The 2MB of SGRAM video memory soldered onto the motherboard displays millions of colors (24-bit) at the low and medium resolutions of 640 by 480 pixels and 832 by 624 pixels, respectively. But you're limited to only thousands of colors (16-bit) in the highest resolution of 1,024 by 768 pixels unless you insert an 2MB SGRAM module in the SO-DIMM slot. If you add a 4MB module, in addition to the maximum number of colors in the highest resolution, you also get additional textures for programs that support 3D graphics.

Processor The 233MHz PowerPC G3 processor contains an integrated FPU (floating-point unit) and 64K level 1 cache (32K data and 32K instruction). The on-chip cache is augmented by a nonupgradable 512K backside cache. The CPU (shown here with heat sink removed) is soldered onto the processor card, not in a ZIF (zero insertion force) socket like the desktop G3 units, complicating the issue of future upgrades. The system bus rates 66MHz.

Memory The iMac has two SO-DIMM (small outline, dual in-line memory module) slots—an empty one on top and one on the underside of the processor card that's filled with 32MB of SDRAM (Synchronous Dynamic Random Access Memory, a type of memory increasingly common in the Wintel side of the world). Apple claims the iMac accepts a maximum of 128MB of memory, requiring one 64MB module in the empty upper memory slot and replacing the existing 32MB module in the lower slot with a second 64MB module. At press time, all this RAM would cost you an estimated $250.



Graphics Accelerator The ATI Rage IIc chip accelerates video and 2D/3D graphics using Apple's 3D RAVE technology. Die-hard gamers lament the lack of 3Dfx's more powerful Voodoo chip—or even the newer (and faster) Rage Pro chip.

Sound Input Port This 3.5mm miniplug connector is compatible with the Apple PlainTalk Microphone for 16-bit CD-quality stereo input at a sampling rate of 44.1KHz. However, speech recognition is not yet supported.

Universal Serial Bus The keyboard connects to either of these USB ports, leaving one free for another USB peripheral.

Sound Output Port For the best quality sound, bypass the internal speakers by plugging headphones or powered speakers into this 3.5mm miniplug connector, or route the output to your stereo system with a simple patch cable.

Mystery Port Officially, the iMac offers no expansion ports, but this small panel can be removed to reveal a relatively cavernous space below the motherboard. Inside there's an undocumented 160-pin connector labeled "Mezzanine" that's rumored to offer access to the PCI bus in much the same way as the Power Mac G3s' personality slot.

Ethernet Apple didn't cut corners with the built-in, autonegotiating 10/100Base-T Ethernet connector (RJ-45), which can be used for local area networking. With a top speed of 100 Mbps, it is fast enough for DSL (digital subscriber line) and cable modems in the future.

Programmer's Button Insert a straightened paper clip into this hole or press Command-Power to open a minidebugger. The debugger is for programmers, but here's a tip you can try: If your Mac crashes, press the Interrupt Switch and enter *G FINDER*, followed by the Return key, and you may be taken to the Finder. If it works, save open documents and choose Shut Down from the Special menu.

Reset Button If pressing the Command-Control-Power key combination fails to restart the iMac in the event of a serious crash, use a straightened paper clip to press the Reset button, located behind a tiny hole below the small triangle icon. If this fails to restart the iMac, unplug the machine and restart.

Modem The internal modem supports both the older K56flex and newly approved V.90 standards with data speeds up to 56 Kbps and send/receive fax speeds up to 14.4 Kbps. The iMac also comes bundled with Microsoft's Internet Explorer 4.01 & Outlook Express for Web browsing and email, respectively, and includes a 30-day free trial offer from EarthLink's Total Access 2.01 for easy, out-of-the-box Internet access.

a brief history of mice

M0100 Introduced on January 24, 1984, as part of the original Macintosh, mouse model number M0100 was, to put it kindly, a large, two-toned brick based on the design used by the Lisa the previous year. Its DB-9 connector plugged into a dedicated mouse port on the rear of the Macintosh, and the keyboard plugged into its own RJ-11 jack on the front of the Mac. This clunker remained in use with the Mac 512K and Mac Plus.

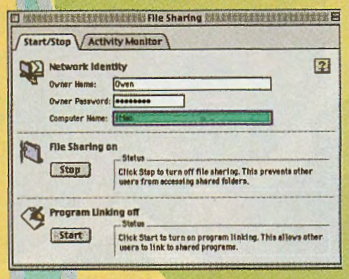
Apple Desktop Bus Mouse Introduced along with the Mac II and Mac SE on March 2, 1987, the slimmed-down Apple Desktop Bus Mouse was created by the noted industrial design firm frogdesign (http://www.frogdesign.com). Most users found its lower profile, large button, and angled top much more comfortable to handle. Teflon glide pads were added to the bottom to facilitate movement. The 4-pin ADB connector could daisy-chain into the side of the new ADB keyboard or plug into one of the two ADB ports on the rear of the Mac (secret: If you ever need to extend an ADB device's reach, you can use a standard S-video cable). The ADB Mouse was included with every desktop Mac sold from 1987 to 1992.

Apple Desktop Bus Mouse II Code-named Topolino (Disney's name for Mickey Mouse in Italy), the Apple Desktop Bus Mouse II embodied Apple's new Espresso industrial design language featuring curvature and central symmetry. The single button was enlarged to extend across the entire front of the mouse where users' fingers naturally fell, and the body arched up so it could be cupped comfortably in the palm.

Apple USB Mouse The Apple USB Mouse premiered with the iMac on August 15, 1998. The newest mouse is shaped like a yo-yo and features the same two-tone translucent plastic used everywhere else on the iMac. Of note are the oval button, "sticky" blue finger rests, and clear Apple badge that allows you to watch the blue/white striped ball spin underneath as you move the mouse. As a hot-swappable device, the mouse can be safely plugged into the side of the keyboard or one of the two USB ports on the right side of the iMac, even when the computer is on (don't try this with an ADB mouse or you might damage both it and the Mac).

ethernet

If you have an existing Ethernet network, use a standard Ethernet cable to plug the iMac into the hub. If you lack a hub, but your other Mac has an Ethernet port, run a crossover cable (available for $5.97 from System Connection at 800-877-8262 or 801-373-9800; ask for part number 101021-06) between the two Macs. If your Mac has an older AAUI Ethernet port, you also need a 10Base-T transceiver. Macs that lack an Ethernet connector require the purchase of a LocalTalk-to-Ethernet bridge (see "Hook Up Your Macs with Superfast Ethernet," Nov/97, p50).



1 On both computers, launch the AppleTalk control panel, choose Ethernet from the Connect Via pop-up menu, then close the control panel and save your changes.

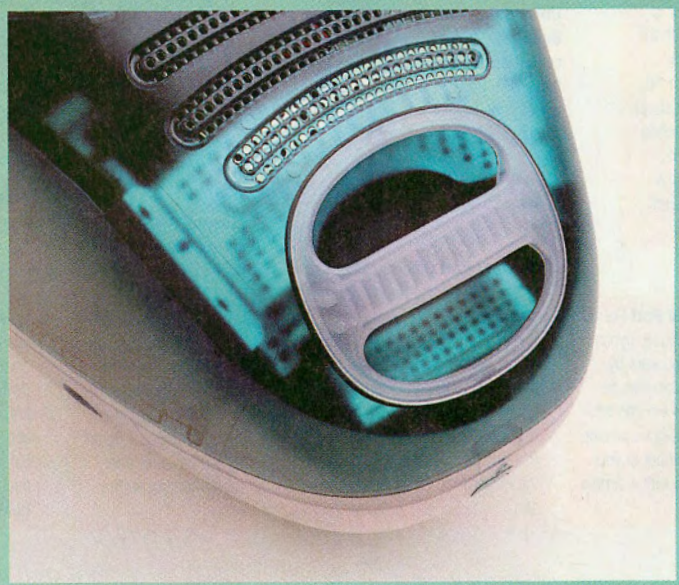
2 On both computers, open the File Sharing control panel, enter your name and password, turn File Sharing on, then close the control panel.

3 On both computers, open the Chooser, make sure AppleTalk is active, and select AppleShare. Double-click the other Mac from the list of file servers, then enter your name and password. When you have finished, each Mac's hard drive appears on the other's desktop and acts just like any other volume.

4 Drag and drop files between the two Macs to your heart's content.

the handle that rocks

The compact, all-in-one design includes an integrated handle on the rear, as did the original Macintosh. However, the iMac weighs 38.1 pounds, so you won't want to move it unless absolutely necessary. The handle also serves as a convenient place to thread a security cable to keep envious friends from walking off with your iMac.

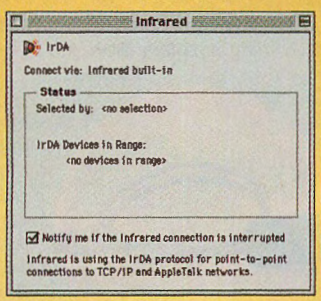


three ways to move in your stuff

Just because the iMac doesn't have a floppy drive doesn't mean there's no way to transfer files between it and another Mac. Here are several different solutions, depending on what type of hardware you own.

infrared

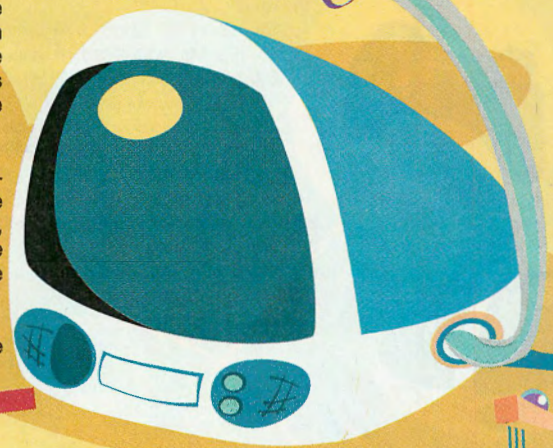
The Infrared window on the front of the iMac isn't nearly as fast as Ethernet, but it does provide another connection possibility for IrDA-compliant Macs such as the PowerBook 2400, 3400, and G3 series. Make sure the iMac and the other computer are no more than 3 feet apart and the IR windows are facing one another.



1 On both computers, launch the Infrared control panel, select the checkbox at the bottom to notify you if the Infrared connection is interrupted, then close the control panel.

2 On both computers, launch the AppleTalk control panel, choose IrDA from the Connect Via pop-up menu, then close the control panel and save your changes.

3 Follow steps 2 through 4 under the Ethernet instructions.



modem

If your other Mac lacks an ethernet or infrared port but has a modem, you have several options. You could email files to yourself and then use the iMac to download them, or you could take advantage of Mac OS 8's Personal Web Sharing feature to make your hard drive available to the iMac over the Internet. However, if the two Macs are in the same room, it's best to skip the outside phone lines altogether and just exchange files directly using AppleWorks (or any terminal application, such as ZTerm, available at http://www.shareware.com).

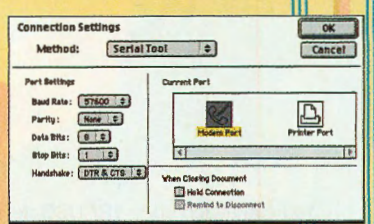
1 Plug a standard phone cable into the iMac's modem and connect the other end to the "wall jack" RJ-11 port of your other Mac's modem.

2 On both computers, open the Modems control panel, choose the appropriate modem, and select the Ignore Dial Tone checkbox.

3 Using a utility such as Aladdin Systems' StuffIt Deluxe (408-761-6200, http://www.aladdinsys.com), compress into a single archive any files you want to exchange to reduce transmission time and complexity.

4 On both computers, launch AppleWorks and create a new Communications document.

5 On both computers, choose Connection from the Settings menu. Choose Serial Tool from the Method pop-up menu. Under Port Settings, set the Baud Rate to match the maximum speed of each modem (it's 57600 for the iMac), then make sure the other variables are set as follows for both modems: Parity, None; Data Bits, 8; Stop Bits, 1; Handshake, DTR & CTS.



6 On both computers, choose File Transfer from the Settings menu and ensure that the default settings are as follows: Protocol, Xmodem Tool; Method, MacBinary; Transfer Options, Standard.

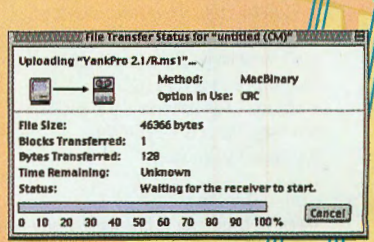
7 On both computers, choose Open Connection from the Session menu.

8 On one computer, type *ATD* and press Return (this is the Hayes command to "dial" the modem).

9 On the other computer, type *ATA* and press Return (this is the Hayes command to "answer" the modem). The modems should negotiate a connection and, if successful, display the word "Connect" followed by the speed.

10 Choose Send File from the Session menu on the sending computer, select the archive you want to transmit, then click Send.

11 On the receiving computer, choose Receive File from the Session menu and the file transfer will automatically begin. When completed, the archive is saved in the default folder specified in the File Transfer settings dialog box.



what's all the hub-bub?

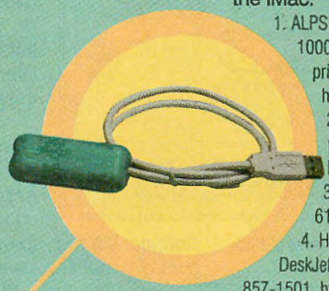
The iMac is the first Macintosh to use USB technology instead of ADB, SCSI, and serial ports to hook up peripherals. USB, supported by Windows 98 as an emerging Wintel standard, means more choices for iMac addicts. PC vendors need only write a Mac software driver to turn their PC products into Mac products. A bevy of USB peripherals have already been announced for the iMac, and more are expected. Check out what's below.

input devices

Don't like the keyboard? Hate the mouse? Ditch 'em for these.

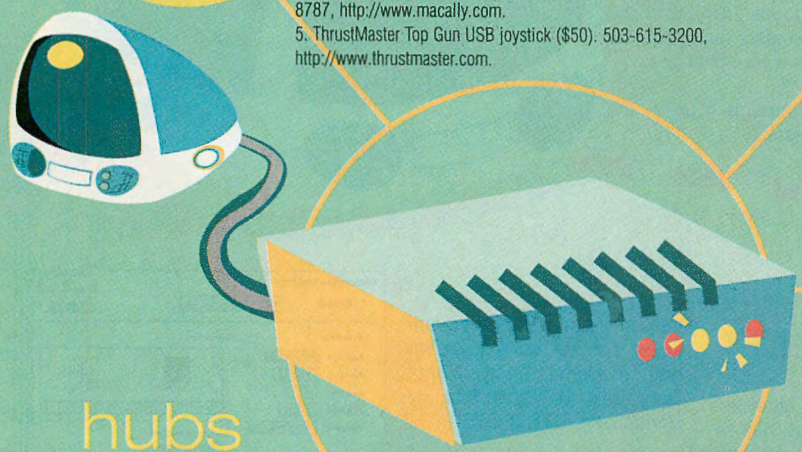
1. CH Products USB GameStick 3D joystick ($49.95 street). 760-598-2518, http://www.chproducts.com.
2. Gravis GamePad Pro USB ($29.99). 800-280-8318 or 650-572-2700, http://www.gravis.com.
3. Kensington Mouse in a Box USB replacement mouse ($39.99). 800-280-8318 or 650-572-2700, http://www.kensington.com.
4. Macally iBall trackball ($49), iKey replacement keyboard ($69), and iMouse replacement mouse ($49). 800-644-1132 or 626-338-8787, http://www.macally.com.
5. ThrustMaster Top Gun USB joystick ($50). 503-615-3200, http://www.thrustmaster.com.

USB convertors



If you're upgrading to an iMac from an older Mac, the following adapters allow you to use existing non-USB devices on the iMac.

1. ALPS Electric USB iMac Interface Kit for ALPS MD-1000 and MD-1300 photographic-quality color printers ($99.95). 800-825-2577, http://www.alpsusa.com.
2. Epson adapter kit for the Stylus Color 600 printer ($49). 800-463-7766, http://www.epson.com.
3. Griffin Technology iMate ADB adapter ($29). 615-255-0990, http://www.griffintechnology.com.
4. Hewlett-Packard Printer Cable Kit for iMac for the DeskJet 670C and DeskJet 690C printers ($69). 650-857-1501, http://www.hp.com.
5. Momentum uConnect serial adapter ($84) and uConnect for Printers ($99). 425-893-8100, http://www.momentuminc.net.
6. Farallon EtherMac iPrint adapter ($99). 510-814-5000, http://www.farallon.com.



cameras scanners

The iMac's USB port handles a low-cost video camera, high-end digital camera, or flatbed scanner with equal ease.

1. Connectix QuickCam VC videoconferencing camera ($99). 800-950-5880 or 650-571-5100, http://www.connectix.com.
2. Kodak Digital Science DC 220 ($699) and DC 260 ($899) cameras. 800-508-1531, http://www.kodak.com.
3. Umax Technologies Astra 1220U scanner ($179). 800-562-0311 or 510-651-4000, http://www.umax.com.

hubs

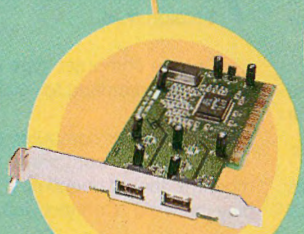
You can attach up to 127 USB devices to your iMac, but you don't daisy-chain them one into the other as with ADB. USB employs a hub topology like Ethernet, with the hub connected to the iMac and peripherals plugged into the hub. The iMac's keyboard plugs into one of the two USB ports on the right side of the iMac and acts as a hub, allowing you to connect both the mouse and another USB device. That leaves one unused USB port on the side of the iMac. Connect one of the following hubs into this port to plug in more USB devices.

1. ADS Technologies USB Hub ($79.95). 800-888-5244 or 562-926-1928, http://www.adstechnologies.com.
2. Belkin Express Bus Hub ($99). 800-223-5546 or 310-898-1100, http://www.belkin.com.
3. Entrega Technologies 4 Port USB Hub ($79) and 7 Port Hub ($129). 949-859-8866, http://www.entrega.com.
4. Macally 4 Port Universal Serial Bus iHub ($79). 800-644-1132 or 626-338-8787, http://www.macally.com.

storage

One of the major complaints about the iMac is that it lacks a floppy drive. Apple brushes this aside by saying that most software is now distributed on CD-ROMs, which the iMac can read on its 24X drive, and personal files are exchanged over the Internet, which the iMac can handle with its built-in modem. However, the floppy habit may be hard to break. While Apple has no plans to offer any removable drives for the iMac, several third-party vendors have already stepped up to the plate.

1. Imation 120MB SuperDisk USB ($189). 888-466-3456, http://www.imation.com.
2. Iomega 100MB USB Zip removable cartridge drive (under $150). 800-697-8833 or 801-778-1000, http://www.iomega.com.
3. Newer Technology 1.4MB iDrive ($89). 888-656-8324 or 316-943-0222, http://www.newertech.com.
4. SyQuest Technology USB SparQ 1.0GB removable cartridge hard drive ($249). 800-245-2278 or 510-226-4000, http://www.syquest.com.



USB adapters

Over 29 million Macs have been sold to date, none of which have USB ports. So it's likely that vendors will continue serving this market for a long time to come. However, if you spot a USB product that you'd just love to be able to use on your older Mac, consider one of the following cards that add USB ports to your computer.

1. ADS Technologies USB Port PCMCIA card for PowerBooks ($89.95) and USB Port PCI Card for Power Macs ($59.95). 800-888-5244 or 562-926-1928, http://www.adstechnologies.com.
2. Keyspan USB PCI Card ($79). 800-986-9146 or 510-222-0131, http://www.keyspan.com.

Owen W. Linzmayer is breathing easier now after successfully tearing apart and reassembling *MacAddict*'s only iMac three times during the preparation of this article.

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reviews

We called 'em as we saw 'em—hardware and applications galore.

CorelDraw 8

DESIGN & GRAPHICS

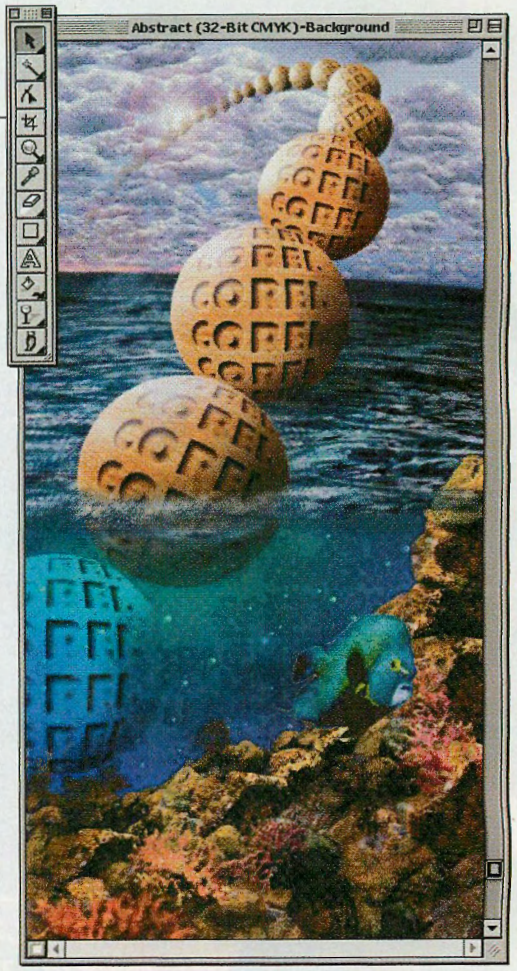
COMPANY: Corel
CONTACT: 800-772-6735, http://www.corel.com
PRICE: $695 (SRP), $149 upgrade or trade-in
REQUIREMENTS: PowerPC, System 7.6.1 or later, 32MB of RAM with virtual memory on, 200MB of free hard disk (full install), CD-ROM drive

FREAKIN' AWESOME
The most valuable products, the coolest gizmos.

SPIFFY
A solid offering. Overall a good investment.

YEAH, WHATEVER
A few good features, but generally a waste of time and money.

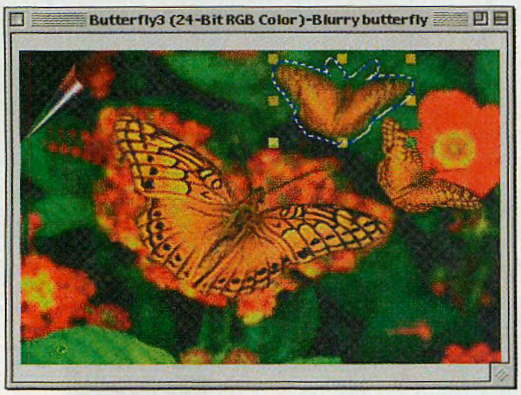
BLECH!
We hate to even blotch our pages with the thing.



COREL'S TIGHT INTEGRATION of CorelDraw and Photo-Paint lets you quickly bring together illustrations that use both vector and bitmap graphics.

An ever-changing interface, PostScript problems, and Windows-esque features plagued previous versions of CorelDraw for the Mac. In the face of these problems, the company's tenacious commitment to offering Mac graphics pros an alternative to Adobe is admirable. With the latest version, Corel has come tantalizingly close to offering Mac artists a viable option, but a few missteps keep it from grasping the brass ring.

The three programs that make up the CorelDraw 8 package—CorelDraw 8, Photo-Paint 8, and CorelTrace 8—attempt to combine the best of Illustrator, FreeHand, Photoshop, ImageReady, Streamline, and even a touch of Premiere in one integrated experience, and for considerably less money than the total cost of those applications. The fact that CorelDraw by and large works—and was easy for even a dedicated Adobe-head like myself to use—is a tribute to the interface team's effort to make this version of Corel the most Mac-like to date.



Regrettably, the team didn't go far enough. Corel needs to rewrite the application from the ground up for Mac, à la Office 98. CorelDraw's support for AppleScript, Apple Guide, and ColorSync is superb, and its ease of use is much improved. But if this were a true Mac application, I wouldn't have encountered crashes when the program couldn't find the "registry" or problems when I was adjusting the "properties" of objects (both are Windows terms), not to mention Windows-style icons for Open File and Print commands and the confusing reversal of the Shift and Command keys in addition and subtraction functions.

Another shortcoming of version 8 is its RAM requirements. Photo-Paint and CorelTrace recommend 20MB of RAM to run each program; CorelDraw wants 30MB to itself. Indeed, the installer will not even start without at least 32MB of physical memory on your target machine. As these RAM requirements are at least double what the Adobe programs ask for, should you want to run more than one application concurrently you'll need a lot of SIMMs or DIMMs for the privilege.

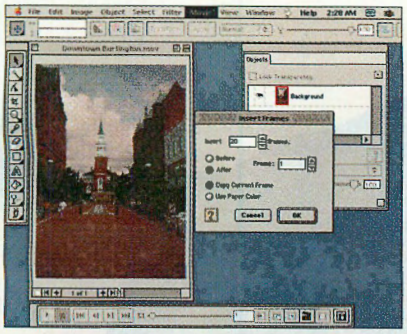
The suite also takes up a whopping 200MB of space on your hard drive, but for once this is warranted. Corel has generously stuffed the discs with a large font library, clip art, a third CD full of stock photos, third-party plug-ins such as DigiMarc and Photo/Graphic Edges, Xao's Paint Alchemy brushes, Cumulus image management, and Diamondsoft's Font Reserve. Add to that a well-written (if sparsely illustrated) manual, a complete printed guide to the various clip libraries, a guide to commercial printing, and a thorough tutorial in both print and Apple Guide versions. Corel has delivered a comprehensive and extraordinary value.

IN PHOTO-PAINT, every new object becomes its own layer, which you can transfer intact back and forth between Photo-Paint and CorelDraw. Photoshop plug-ins (as seen here in the cloning and blurring effects) work without a hitch.

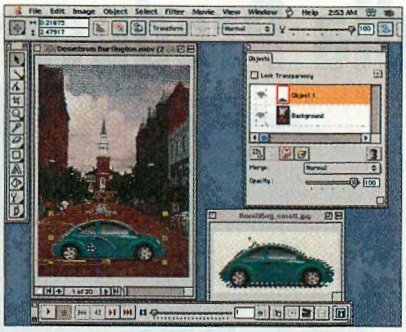
Several factors smooth over the transition from Adobe products: customizable workspaces that allow the suite to act more like

Making an Animation

Corel Photo-Paint allows you to take backgrounds and objects from any format and bring them together as QuickTime movies, QTVRs, or animated GIFs.

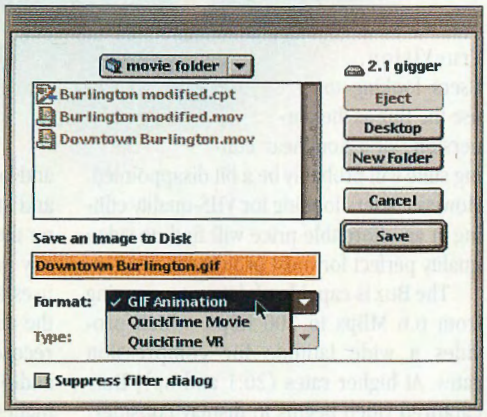


1 Open or create an image. From the Movie menu select Create Movie From Document. Set the number of frames you want, then copy the current frame into all the new frames. Save.



2 Open your images. Mask off the parts you want, then cut and paste them into the movie file. Position the objects, then flatten the image and move on to the next frame.

3 You can overlay the previous frame and precisely position items from one frame to the next. Paste in your object again, reposition, flatten, and move on. Repeat as needed.



4 Save and then play back your finished movie right in Corel. You can save it as a QuickTime movie, a QTVR panorama, or a color-safe GIF animation—great for fast Web work!

Illustrator, FreeHand, and Photoshop; full compatibility with Photoshop- and Illustrator-native files (layers and blends included); and the ability to import and export a huge variety of PC and Mac graphics formats (including QuickTime). Within the suite, you can manipulate text, photos, and bitmaps; animate GIFs; touch up QuickTime VR panoramas or digital video sequences; even put together whole Web pages—and save all of them into almost any format you desire. CorelDraw 8 also features full import and export abilities for previous versions of the program.

A detailed, clear glossary explains each function of Photoshop, Illustrator, and Freehand, and exactly how to accomplish the same things in CorelDraw or Photo-Paint. Once you get past a couple of minor idiosyncrasies, you can start incorporating your old habits into the new program pretty quickly. Within a couple of hours you'll feel as though you've been using Corel for years.

Service bureaus, which have long shunned Corel products because of their PC-centric history—that is, poor color management, lack of consistency, and error-prone PostScript—can finally risk installing a copy. My tests with outputting to film and to PostScript files succeeded with flying colors, thanks mainly to the program's addition of strong ColorSync support and more Mac-specific PostScript interpretation.

So who might want to use Corel? Students or starving graphic artists should find the $695 price a bit easier to swallow than the $1,500 or more they'd spend for an equivalent range of functionalities in other programs. Graphic artists working at home can invest in CorelDraw 8 with the confidence that when they convert their files to Illustrator's or Photoshop's format for exchange with print-shop Macs, their work will translate with a minimum of trouble. The advanced feature sets of CorelDraw and Photo-Paint also allow exploration of other types of graphics, such as animated GIFs. Moreover, CorelDraw 8 is a great tool for PC-using graphics artists who are migrating to Mac publishing (and discovering its glory). Printshops that deal with PC clients can use Corel's powerful translation abilities to touch up and ready Windows files for the big-time presses.

On the other hand, the program has a number of annoying bugs and Mac OS conflicts to resolve. The manuals say nothing at all about installation procedures (for example, required extensions and known conflicts). The application responds quite slowly (even more so than Photoshop) to any processor with a rating of less than 180MHz.

Corel really wants to make a dent in the Mac graphics industry, and it has already won half the battle. For value, features, and compatibility, CorelDraw 8 wins the day. If Corel would follow in Microsoft's footsteps and rewrite this suite of Mac software so it's completely free of Windows code, Adobe and Macromedia would truly have something to worry about, and Mac users would have their favorite thing—a choice.—*Charles Martin*

GOOD NEWS: Amazing feature set. More Mac-like than previous versions. Great cross-platform and cross-application compatibility. Customizable workspaces. Value for price. Replaces many separate graphics programs with just three. Excellent AppleScript and ColorSync support. **BAD NEWS:** Buggy. Still mostly ported from Windows. Slow on anything less than a 604e. RAM hog.

in review

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Buz Multimedia Producer

MULTIMEDIA

COMPANY: Iomega
CONTACT: 801-778-1000, http://www.iomega.com
PRICE: $299.95 (SRP)
REQUIREMENTS: Power Mac G3 (not including G3-upgraded Macs), one free PCI slot, 32MB of RAM

Photo by KB

THIS CUTE LITTLE POD houses high-quality hardware suited for video capture.

Iomega turned the world of removable storage upside down with the introduction of the Zip drive, and it is poised to do the same to the digital video world with the Buz Multimedia Producer, its new combination PCI video capture and Ultra SCSI card. The Buz requires a free PCI slot and only works in Power Mac G3s that haven't been upgraded with third-party processor cards.

The Buz uses Motion JPEG to capture full-screen video resolutions up to 720 by 480 at 60 fields per second (30 frames per second) in 24-bit color. It can also capture stills and PAL/SECAM video at 720 by 576 resolution at 50 fields (25 frames) per second. It uses an MJPEG chip from Zoran for video compression, which provides very good image quality at higher data rates.

Iomega claims that the Buz can achieve broadcast-quality video. While its video is very good, especially for consumer editing, the Buz's image quality is not as crisp as video captured by high-end boards such as the Radius VideoVision Studio and the Targa TrueVision. Users looking to use the Buz as the cornerstone of a nonlinear editing suite will probably be a bit disappointed. However, users looking for VHS-quality editing at an affordable price will find its video quality perfect for most projects.

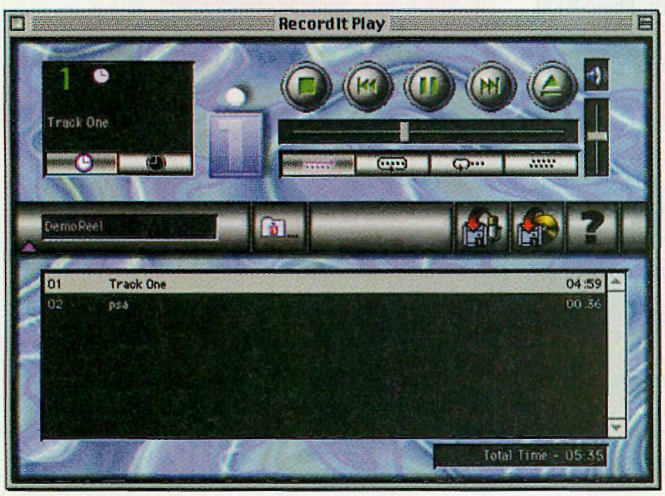
The Buz is capable of data rates ranging from 6.6 MBps to 200 KBps, which provides a wide latitude for compression rates. At higher rates (20:1 and up), Buz-captured video begins to display considerable MJPEG artifacts, especially in full-screen video. At 3:1 compression, the lowest the Buz will handle, there are still some artifacts, but few enough so they're noticeable only on large-screen televisions or video projectors.

Full-frame, full-motion video requires quite a bit of hard drive space and bandwidth. Fortunately, in addition to capturing video, the Buz comes equipped with a narrow Ultra SCSI port that adds seven fast SCSI addresses to your system and is capable of burst transfer rates up to 20 MBps.

One of the Buz's nicest features is its purple breakout box. Like the breakout box on the VideoVision Studio, the Buz box connects to a port on the back of the card and extends via a cable to the side of your computer. The box contains inputs and outputs for S-Video, composite video, and stereo audio. Despite the audio inputs on the breakout box, the Buz doesn't actually have built-in audio capture. Instead, it uses a pass-through cable that connects to the audio input and output on the Mac for recording and playback. Macs can capture audio at 44KHz in 16-bit stereo, but for the highest fidelity, a dedicated sound capture card would be a better solution.

To get users started on the road to digital video, the Buz comes with QuickTime 3 Pro; Adobe Premiere 4.2 LE, a feature-limited version of Adobe's nonlinear video editing package; and Iomega's RecordIt audio software, a basic MPEG-2 audio capture application that can record audio from the Mac's sound inputs or pull tracks off CDs. The applications are good values and should meet the needs of most consumer users.

Overall, Iomega's Buz Multimedia Producer is outstanding. No other capture card can provide such high image quality for under $800. Web video producers will find it perfect for creating movies destined for the Internet, and home users will love its low price and ease of use.—*Rick Sanchez*



THE BUZ COMES WITH IOMEGA'S own RecordIt software, a good tool for audio recording and audio CD track extraction.

GOOD NEWS: Inexpensive. Adds an Ultra SCSI port. Includes QuickTime 3 Pro, Premiere 4.2 LE, and Iomega RecordIt. BAD NEWS: Costs $100 more than the PC version. Requires a nonupgraded G3 Mac. No onboard audio capture.

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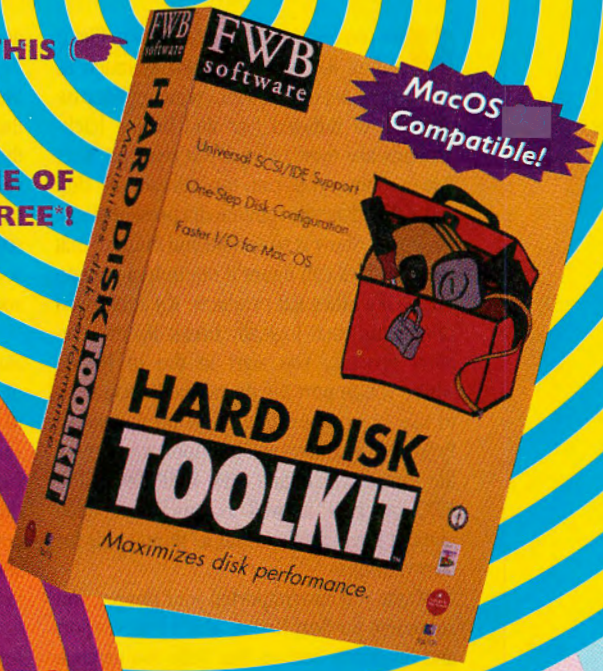

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reviews

Kai's Power Show

MULTIMEDIA

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CONTACT: 805-566-6200, http://www.metacreations.com
PRICE: $49.95 (SRP)
REQUIREMENTS: PowerPC, System 7.5.5 or later, 16MB of RAM, 50MB of free hard disk space, CD-ROM drive, 16-bit video (thousands of colors) or greater

POWER SHOW HELPS YOU SPICE UP your slide shows with sound, special effects slide transitions, animated text, and more.

Have you ever seen a slide show you liked? (Admit it—you hate them as much as everyone else.) Well, rejoice, because the days of bulleted lists and boring backgrounds are over. Using MetaCreations' Kai's Power Show, you can turn dreadfully dull slides into dynamic multimedia presentations.

Power Show is so simple and intuitive that even newbies can figure it out in less than an hour. Like other Kai products, it's comprised of "rooms" that logically break up the creation process. You start in the In Room, where you import the digital media you want to use or open existing Show presentations. Power Show allows you to import a variety of file formats, including TIFF, BMP, PICT, JPG, FPX, and PSD, as well as QuickTime video clips. It then lays them out as thumbnails for easy viewing.

Once you have imported your images, you zoom into the Sort Room, which features Sort and Sequence buttons that help you arrange your content efficiently. At the bottom of the Sort Room are the Sequencer and Nano Sequencer, which lay the show out chronologically, like a filmstrip. To reorder slides, just drag and drop them from one position to another. So simple.

From there you move into the Edit Room. This is where the multimedia fun begins. In the Edit Room, you can add real-time special effects transitions between each slide; all sorts of text, including animated words that zoom into your slides like a bird in flight; and sound via the Sound Fx window.

The final room in Power Show is the Out Room, where you save your show in a variety of formats, including HTML for exporting it to the Web. Best of all, Power Show lets you save your presentation in a format that you can email to your friends. Even folks who don't have Power Show installed on their computers will be able to see your slide show if you include the Show Player Installer in your email.

As great as this program is, some of its text, transition, sound, and background templates are supercheesy, so be careful what you include—and how much—or your show will end up looking like a bad TV commercial for a local electronics store. Power Show also doesn't feature full platform parity; while PC users can import Microsoft PowerPoint slides, Mac users can't. For business users who want PowerPoint's advanced formatting features, this is a major bummer.

If you crave an easy-to-use software package for creating slide shows, then you've found your program. Power Show's intuitive interface, multimedia capabilities, and high-quality output will have audiences oohing and aahing in no time.—*Jeff Titterton*

GOOD NEWS: Easy to learn, easy to use. High-quality output. Lots of multimedia capabilities. Cool, intuitive interface. Inexpensive. **BAD NEWS:** Doesn't allow Mac users to import PowerPoint slides. Some templates are cheesy.

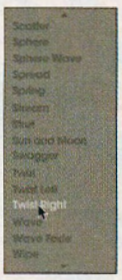
Adding Animated Text

A picture may be worth a thousand words, but you'll need a few pieces of animated prose as well if you want to hold your relatives' attention at this year's family reunion slide show.

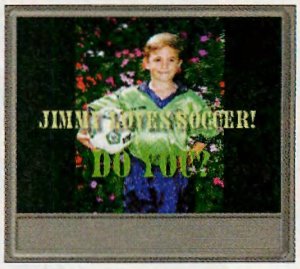
1 In the Edit Room, click on the photo to which you want to add text in the Sequencer. It shows up in the Current Frame window. Click on the Text Fx label to open the Text Fx window.

2 Type text into the Text Entry box below the image. To move the text, drag the text string and drop it where you want it. Use the various pop-up menus to change the font, color, and so on.

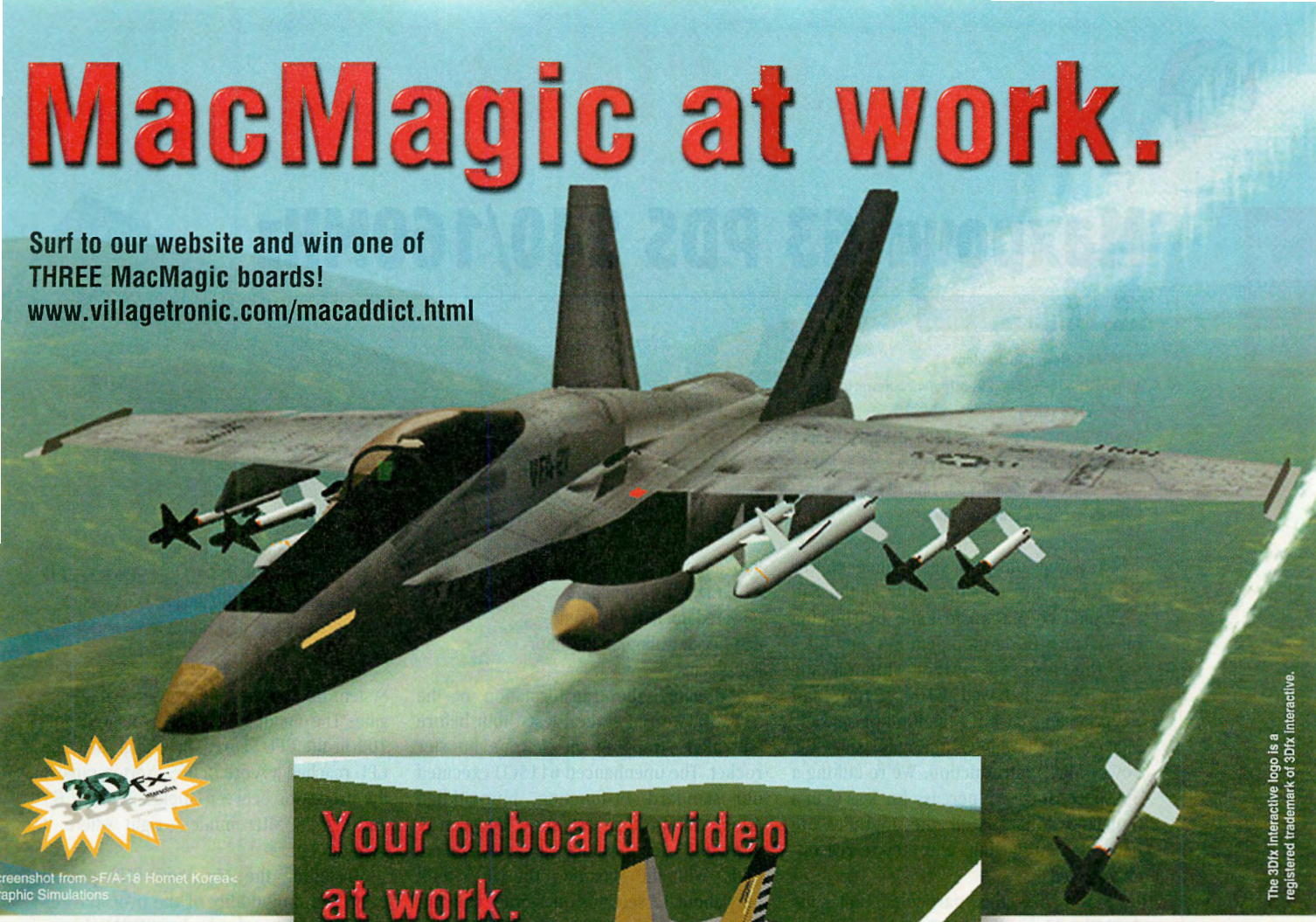
3 With the text selected, click on Fx In. Choose an animation option from the pop-up menu that appears.



4 Animate a second string of text by repeating step 2 and using the Fx Out menu.



5 When you've finished, click the Apply button. To preview your slide show, click on the Projector icon located in the upper-right corner of the Text Fx window.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Maxpowr G3 PDS 240/160MHz

HARDWARE

COMPANY: Newer Technology
CONTACT: 316-943-0222, http://www.newertech.com
PRICE: $725 (SRP)
REQUIREMENTS: Power Mac 6100, 6150; Performa 6110, 6112CD, 6115CD to 6118CD; System 7.5.1 or later
SPECIFICATIONS: 240MHz G3, 1MB L2 backside cache, 160MHz cache-to-processor bus

Photo by Aaron Lauer

IT MAY NEVER HAVE BEEN MEANT to happen, but a 6100, thanks to its processor-direct slot, can now rocket to G3 heights.

It's going on one year since Newer Technology stole the show at the San Francisco Macworld Expo by showing off its then-in-development G3 upgrades for the processor-direct slot on the PowerPC 601–based 6100, 7100, and 8100 Power Macs. It's the kind of upgrade Mac owners have been pining for since the Power Mac's introduction. We're talking a 500 percent speed increase for less than a thousand dollars. Well, the upgrades are here, they're blazing, and they're reasonably priced.

Newer lists this particular unit—the 240MHz G3 for the 6100 series of Power Macs—at $725, but we found it at Cyberian Outpost (http://www.outpost.com) for $667.95. It comes with a full megabyte of backside cache and a 3:2 ratio for cache timing, which means the processor accesses the cache at 160MHz. Once we inserted the card into an old Performa 6115CD, the machine powered up, looked around, and began walloping neighboring systems.

To gauge the transformation of the 6115CD, we ran several tests both before and after strapping on Newer's booster rocket. The unenhanced 6115CD executed our standard 11-function, blur-riddled Adobe Photoshop test suite between 1 minute, 15 seconds and 1 minute, 20 seconds. With the Maxpowr, the 6115 took only about 12 seconds on average to complete the same set of operations. In fact, thanks to that full megabyte of backside cache, each time we ran the test, the G3-powered 6115 achieved a better score. The first run-through took the newly G3'd Performa 13 seconds. The seventh time, it was all over in only 11 seconds.

The next test for the Performa was a 254-page Microsoft Word 98 document scroll. In its go-round, the standard 6115 configuration finished the scroll in 1 minute, 25 seconds. But once we got the PDS upgrade in place, the Performa raced through all 254 pages in a blinding 20 seconds. Norton Utilities System Info checks likewise showed a huge gain. The unadulterated 6115 scored only 102 in the CPU score. Once upgraded, the CPU reached a score of 665. Norton ranked the processor between Apple's 266MHz G3 and its 233MHz model—right where it ought to be.

Installing the Maxpowr PDS proved easy. The only oddity of the procedure is that you must move the boot ROM chip to the level 2 cache slot—strange, but simple enough to do. Next, install an extension, slide the Maxpowr G3 into the PDS, and a four-year-old sluggish Power Mac roars to G3 life. The difference is incredible. It confirms what we said in our review of Sonnet Technologies' Crescendo PDS G3 upgrade (see Oct/98, p62): A PDS G3 upgrade is the single best Mac upgrade value in existence. Newer's and Sonnet's cards both performed at or above expected levels, and their competitive prices make either one a terrific deal.

The Maxpowr comes bundled with a few Newer Technology software tidbits. These include Newer's SpellTools text editing application (an odd choice for a processor upgrade package, but why not); Newer's Guru, which lets you view RAM upgrade specs for all manner of Macs and printers; and Newer's gauge series, which lets you see how dang fast your machine has become.—*Robert Capps*

PHOTOSHOP DEXTERITY
TIME TO COMPLETE 11-FUNCTION PHOTOSHOP ACTIONS ON A 1MB IMAGE
The lower the number, the better the performance.

Performa 6115CD	1 min 17 sec
Performa 6115*	13 sec (1st run)
Performa 6115*	11 sec (7th run)
Power Mac G3 266MHz	10 sec

* With Maxpowr G3.

MICROSOFT WORD 98 SCROLL
TIME TO SCROLL THROUGH A 254-PAGE WORD DOCUMENT
The lower the number, the better the performance.

Performa 6115CD	1 minute 25 seconds
Power Mac G3 266MHz	20 seconds
Performa 6115CD *	19 seconds

* With Maxpowr G3.

GOOD NEWS: Huge speed increase. Full megabyte of backside cache. Reasonable price. **BAD NEWS:** Can't fix other limitations (slow system bus, tiny hard disk) of your old 6100.

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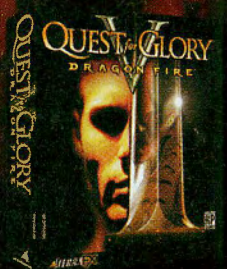

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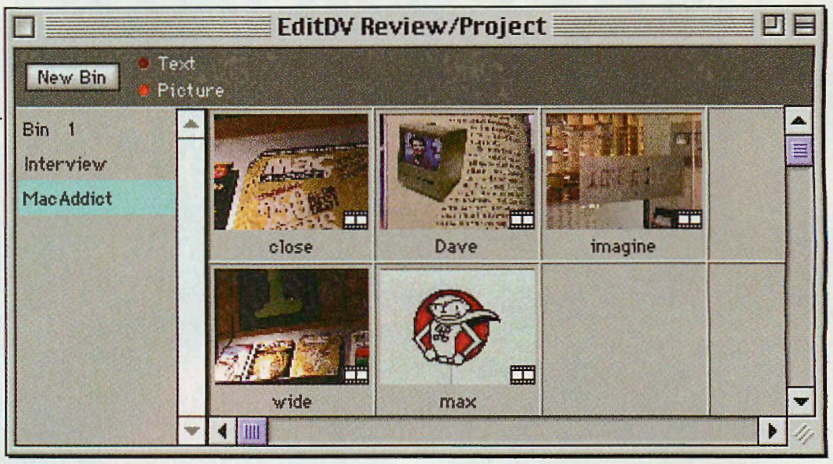
reviews

EditDV

MULTIMEDIA

COMPANY: Radius
CONTACT: 800-572-3487, http://www.radius.com
PRICE: $999 (SRP)
REQUIREMENTS: PCI-based Power Mac, 32MB of RAM, fast hard disk on internal SCSI or SCSI accelerator card, DV camcorder or VTR with FireWire port, QuickTime 2.5



EDITDV'S POWERFUL PROJECT WINDOW allows editors to create multiple bins to organize and sort clips.

Radius's EditDV is actually three products in one box: an IEEE 1394 FireWire card, MotoDV capture software, and EditDV editing software. The package is a reasonably priced, effective way to get digital video into your Mac, edit it, and output it to its destination format. If you output the video back to DV tape, you can edit projects without adversely affecting image quality.

The cornerstone of the EditDV package is the IEEE 1394 FireWire card. Apple initially developed FireWire technology for high-speed transfers of large amounts of data. Considering the bandwidth required for DV, FireWire is an obvious way to get moderately uncompressed data from DV tape to hard drive. The Radius FireWire card fits into any Mac OS computer with a PCI slot, so the EditDV package is usable on all but the first generation of Power Macs. To achieve maximum performance with the EditDV FireWire card, however, you will need a fast hard drive on the internal SCSI or an external hard drive attached to a SCSI accelerator card. The card doesn't actually encode the video signal, as most JPEG- and MPEG-based video cards do, but works by moving data from a DV device to the hard drive. If the hard drive can't sustain 3.6-MBps transfer rates, it will drop data—that is, frames.

When you're playing back DV footage that was captured using EditDV, the DV camera or deck must be attached to both a FireWire card and a TV to decode the video in real time as a full-screen image. If no DV device is available, you can view video as a preview clip on a computer monitor, similar to how Adobe Premiere and other editing packages handle preview clips.

The second product in the EditDV package is MotoDV, Radius's software for capturing data from a DV device to the hard drive. Installation is easy. The installer puts a number of DV extensions in the System Folder, including the SoftDV codec for onscreen playback, and places the MotoDV application on the hard drive. MotoDV is really an elaborate movie-capture window specifically designed for the demands the FireWire card places on the system and hard drive.

MotoDV lets you capture footage from tapes or cameras in real time, as well as in stop motion, with user-definable capture intervals. In storage environments with marginal disk performance (those barely maintaining the 3.6-MBps transfer rate), MotoDV can use its assigned RAM to catch dropped frames as the capture progresses. MotoDV can also capture time code and control a camcorder or DV deck from the keyboard in devices that support these functions. Although MotoDV is a good capture application, it's missing batch capture, an essential editing function that allows you to designate a series of in and out points in time code, click Start, and wait for the captures to take place.

The EditDV editing software, formerly known as Radius Edit, has undergone a number of changes since it was bundled with the Radius VideoVision board. Most important, stability has improved dramatically. EditDV didn't crash once in hours of testing—something unheard of in its Radius Edit incarnation. EditDV also does not need the second monitor that Radius Edit required.

EditDV attempts to bridge the gap between the high-end editing software included in Avid's and Media 100's editing systems, and more consumer-oriented programs such as Adobe Premiere and Strata VideoShop. The EditDV interface consists mainly of a video and audio track timeline, a project window for arranging source material, and a monitors window with source and program displays. While the software provides a more professional editing environment than Premiere or VideoShop, it doesn't offer the refinement and usability of the high-end systems or the variety of filters and transitions Premiere features.

The Project window, one of EditDV's more powerful tools, lets you maintain complex clip organization through a series of clip bins. You can either import files piecemeal or drag and drop a folder into the Project window, creating a new bin. To assemble your project, drag clips from the bins into the timeline or use the

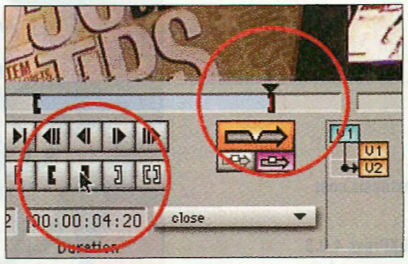
Nonsquare Pixels

If you are unfamiliar with DV, you may be confused when viewing software playback of movies captured with the FireWire card. Instead of the familiar 4:3 aspect ratio picture, you will see a slightly squished rectangle. The image looks squeezed because DV captured with EditDV complies with the CCIR601 DV specification that all DV cameras use (including DVCPro, miniDV, and DVCam). DV cameras capture frames at 720 by 480 pixels, as opposed to the 640 by 480 pixels that make up a digitized frame from an analog camera, but they retain the same 4:3 aspect ratio. The difference is that EditDV and DV cameras use nonsquare pixels to create a frame. Pixels in traditional computer images are perfect squares. Pixels from a DV image are taller than they are wide, but a computer monitor interprets them as standard pixels and widens the image, resulting in a squeezed picture. If the footage is going back out to tape, it will appear normal when played back from a DV device, but if you want to compress the footage for computer playback, you will need to render it as square pixels for playback at the right aspect ratio.

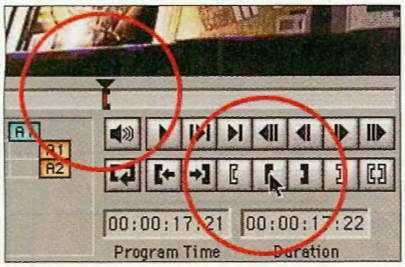
Anatomy of a Three-Point Edit

Set three of the four reference points needed to complete an edit, and EditDV determines the fourth one. You can do a three-point edit using the Source or the Program monitor to determine its duration.

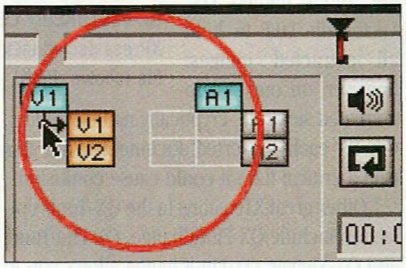
1 This program needs a close-up of *MacAddict* between a wide shot and a cutaway to Max. Open a close-up clip in the Source monitor, move the playback head to the starting frame, and click the In Point button.



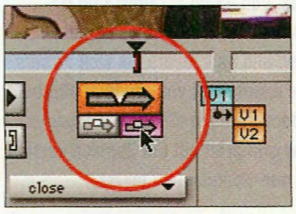
2 To set the out point, move the playback head to the final frame of the clip and click the Out Point button. Now that you have selected the exact duration of the close-up, select an in or out point in the Program monitor.

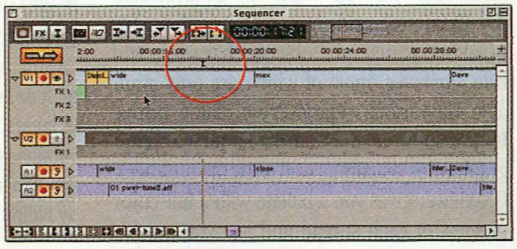


3 If you select an out point, EditDV matches that edit point with your source clip's out point. We set an in point, which it matches with the close-up's in point when it makes the edit.



4 Now that you've set the three edit points, the edit tracks appear in this patch bay. The audio tracks are off and the video edit is set to the Video 1 channel.





5 EditDV can perform two kinds of edits, overwrite and insert. Insert moves all the clips on the right of the edit's out point; overwrite copies over current video.

6 You can make edits from the Monitors or Sequence window. Click the Edit button to splice the close-up of the *MacAddict* cover into the sequence.

more versatile three-point edit—set three out of the four in and out points required to make an edit, and EditDV determines the final point.

One of the EditDV package's only drawbacks is that it doesn't provide a way to capture footage from analog video sources such as VHS or Hi-8. To bring these sources in through the FireWire card, you need to first transfer them to DV. The alternative is to digitize these sources using a capture card, then incorporate the captured footage into your project, but this footage won't be of the same quality as the DV-captured video.

Although the EditDV software isn't as flexible as some editing applications, the package is an excellent solution for desktop DV, providing high-resolution editing at a substantially lower price than M-JPEG analog-to-digital editing solutions of comparable image quality. EditDV allows owners of DV camcorders or decks to realize fully the potential of DV.—*Rick Sanchez*

GOOD NEWS: Works with any PCI-based Power Mac. Broadcast quality images at a tenth the price. **BAD NEWS:** Only works with DV camcorders and decks. Requires a fast hard drive or disk array.

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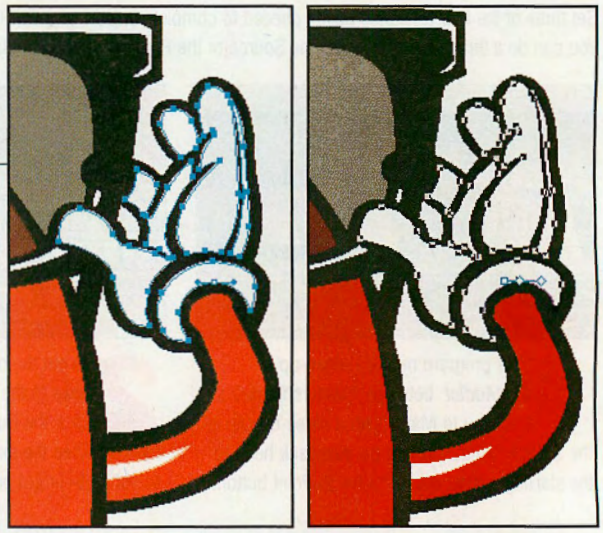
PRICE: $149.95 (SRP), $49.95 upgrade
REQUIREMENTS: Power Mac, System 7.5.5 or later, QuarkXPress 4.0.3



QX-VECTOREDIT LETS YOU convert vector files into editable QuarkXPress documents. Compare the original (shown left) to the converted file (shown right).

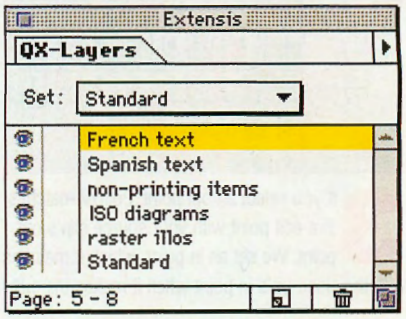
FIND A DEMO of QX-Tools 4.0 on The Disc.

You've upgraded to QuarkXPress 4.0.3 and are enjoying its spiffy new tools, but some of them don't get you quite as far as you need to go. You should definitely take a look at Extensis's newest productivity booster, QX-Tools 4.0. It consists of seven XTensions: QX-VectorEdit, QX-Scaler, QX-FindChange, QX-Layers, QX-Viewer, QX-ItemStyles, and QX-FineTune. Some add completely new goodies to QuarkXPress, and others soup up or build on existing features.

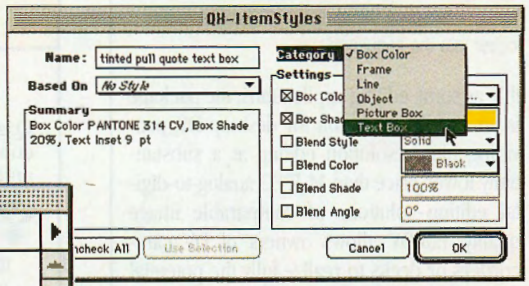
The most eye-popping XTension by far in the package is QX-VectorEdit, which converts vector EPS, Acrobat PDF, and PostScript (print-to-disk) files. We whooped in surprise the first time we watched it convert a vector EPS illustration into an editable Quark document. When we opened the original in a vector illustration program and compared the two side by side, we found that the conversion was faithful to the original file. Some conversions are more successful than others, depending on how cleanly the originating application generates PostScript. The QX-Tools documentation discusses known conversion issues, and the XTension alerts you if it detects conversion errors. Such errors are usually due to items that convert to smaller than 1 point in dimension or Bézier objects that XTension does not understand.

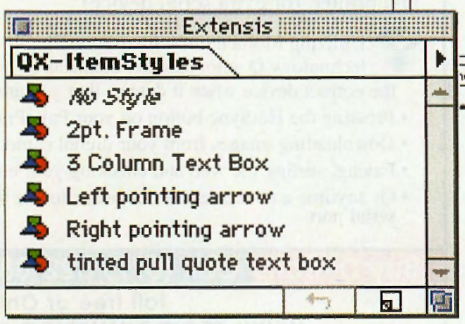
During conversion, the XTension extracts embedded raster images and saves them as TIFF files automatically linked to the converted document. It names each TIFF and places them in a folder for which you choose a location. According to the manual, QX-Tools is supposed to create a single folder named QX-VectorEdit TIFF to hold all extracted images; however, on our system it created separate, cryptically named folders, one for each converted document. While this isn't a critical flaw, it could cause confusion.

Other great XTensions in the QX-Tools collection include QX-FindChange, QX-FineTune, and QX-Viewer. QX-FindChange allows you to search for and change much more than text and its attributes. Like Macromedia's Freehand, it lets you find and change attributes of such items as boxes, text paths, and rules. QX-FineTune supports QuarkXPress 4.0.3's controls and gives you four palettes for tweaking paragraph, object, character, and rule attributes, most of which are only available via various QuarkXPress dialog boxes. It's awesome to adjust attributes such as paragraph rules visually as well as by the numbers. QX-Viewer gives you a palette with a full-color preview of each spread and lets you quickly move around your document to the exact page and portion you want to zoom in on.



IF YOU USE THE LAYERS in Photoshop or other graphics apps, you'll feel at home with QX-Layers. It allows you to create, assign objects to, hide, show, and lock layers, as well as *sets* of layers. For example, if you produce alternate versions of documents in different languages, you can show and print out the Spanish version by hiding all non-Spanish text layers.



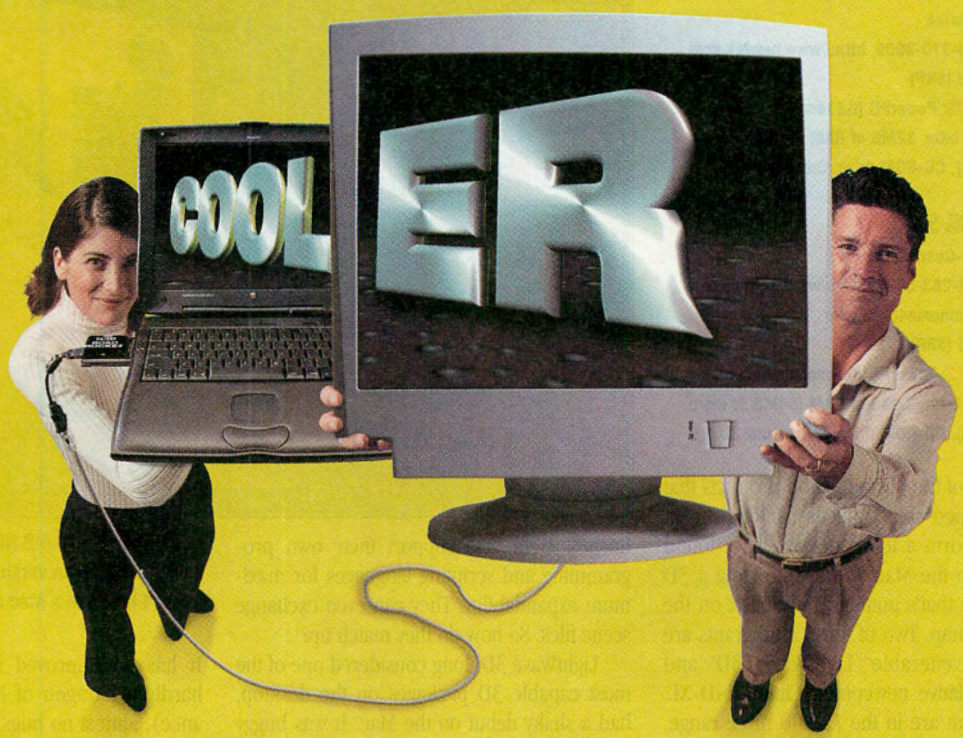


QX-ITEMSTYLES IS A NEW FEATURE of QX-Tools. If you appreciate the time you save using QuarkXPress's paragraph and character style sheets, imagine style sheets for its boxes and rules. Specify and control over 50 object attributes throughout a document. Edit an item style; QX-ItemStyles instantly makes the change in all items assigned that style.

Extensis has done an outstanding job with QX-Tools 4.0. Our only gripe is that palettes, although they're combinable as in Photoshop, are not resizable. Inclusion of resizable palettes would keep the combined tabs visible. Extensis could improve QX-Tools by adding other features (such as the ability to set independent text box insets and fit a box to its contents), but this collection is outstanding as it is.—*Elyse Chapman*

GOOD NEWS: EPS, PostScript, and Acrobat PDF files can be converted to editable QuarkXPress objects. Complex style sheets for item attributes. Very intuitive layers feature. Beefs up new features in QuarkXPress 4.0.3. BAD NEWS: Nonresizable palettes mean combined tabs obscure the outermost tabs.

What cool PowerBook G3s become with an extended desktop.



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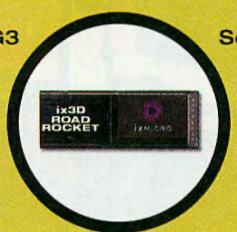

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LightWave versus Cinema 4D XL

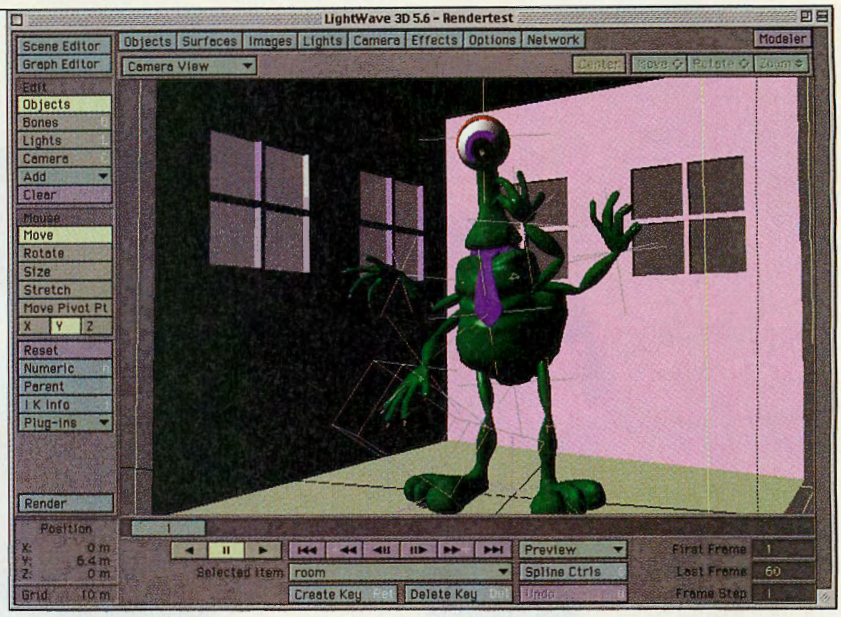
DESIGN & GRAPHICS

LightWave 3D 5.6

COMPANY: NewTek
CONTACT: 210-370-8000, http://www.newtek.com
PRICE: $1,899 (SRP)
REQUIREMENTS: PowerPC (G3 recommended), System 7.5 or later, 32MB of RAM (64MB or more recommended), CD-ROM drive, QuickDraw 3D 1.5

Cinema 4D XL 5.2

COMPANY: 3D-Gear/Maxon
CONTACT: 888-283-5634, http://www.3d-gear.com or http://www.cinema4dusa.com
PRICE: $1,995 (SRP)
REQUIREMENTS: PowerPC (G3 recommended), System 7.5 or later, 32MB of RAM (64MB or more recommended), CD-ROM drive, QuickDraw 3D 1.5



LIGHTWAVE 3D 5.6'S NEW INTERFACE is a lot easier to use than version 5.0's, but it still doesn't look like a Mac app.

FIND A DEMO of Cinema 4D XL 5.2 on The Disc.

Many of the 3D animation products that jumped ship from the sinking Amiga platform a few years ago have found their way to the Mac and are creating a 3D renaissance that's putting Apple back on the animation map. Two of these immigrants are NewTek's venerable LightWave 3D and Maxon's relative newcomer, Cinema 4D XL. Both of them are in the $2,000 price range, and both were created for production situations and outputting high-quality professional images. Both also support their own programming and scripting languages for maximum expandability. They can even exchange scene files. So how do they match up?

LightWave 3D, long considered one of the most capable 3D packages on the desktop, had a shaky debut on the Mac. It was buggy and un-Mac-like, some features didn't work, and few plug-ins were available. Version 5.6 fixes many of these problems, though not all. It has an improved interface (though it's hardly a paragon of Mac-standard compliance), almost no bugs, and many new tools, and it even offers a few third-party plug-ins that you can download at NewTek's Web site.

[continued on page 68]

MacAddict's Mad Rendering Match

Both LightWave and Cinema 4D XL have fast production-quality renderers that deliver a lot of bang for your rendering time. We tested these products head to head to see who would make it into the Rendering Hall of Fame.

To begin the race, we modeled, textured, and posed Irwin Alien in LightWave. We wanted a difficult scene with time-consuming ray tracing, so we made him reflective and had each light cast a ray-traced hard shadow. Next, we imported the LightWave scene directly into Cinema 4D XL. That worked smoothly, with texture, lighting, and bone information requiring only a little tweaking. Then we set up a 24-bit, 640 by 480 render at comparable antialiasing settings and pulled the trigger on our G3 266 with 160MB of RAM.

The results: LightWave rendered the scene in 2 minutes and 17 seconds—pretty good, considering that it had to ray-trace almost the entire frame. But that wasn't good enough to beat Cinema 4D XL's smoking time of 1 minute and 16 seconds. Cinema 4D XL's renderer may very well be the fastest ever written for the Mac.

LightWave rendered Irwin Alien in 2 minutes and 17 seconds...

...but Cinema 4D rendered this nearly identical image in only 1 minute and 16 seconds. *Smokin'!*

Need even more rendering speed? In the first quarter of 1999, Ice (http://www.iced.com) will be shipping BlueIce, a PCI board that directly accelerates Cinema 4D XL's rendering up to 10 times. That's faster than anything but an SGI Octane workstation.

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[continued from page 66]

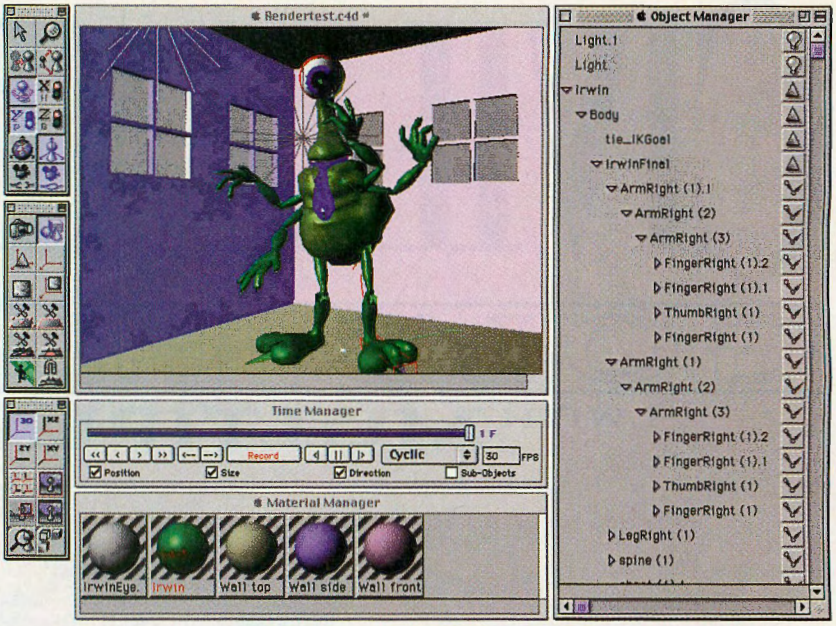
Cinema 4D XL doesn't approach LightWave's reputation, but it has a lot to recommend it, starting with a feature list longer than your arm. It's safe to say that Cinema 4D XL has the fastest ray-tracing renderer ever written for the Mac, faster even than Electric Image's whip-fast phong renderer and certainly faster than LightWave's renderer. The interface is generally intuitive and very Mac-like, with context-sensitive menus and floaters. Maxon's Web site offers a wealth of small shareware plug-ins. And, in a frontal assault on LightWave's market, Cinema 4D XL directly imports LightWave scene files—bones, lights, textures, and all.

One area in which LightWave has the advantage is modeling. New tools in LW Modeler improve its already impressive abilities; modeling organic shapes is simple and enjoyable. The new tools include the Knife, which easily slices the model and creates new polygons; Dragnet, an easy-to-use magnetism tool for manipulating points; and the ability to use triangular patches with MetaNURBs.

While the new NURB modeling tools in Cinema 4D XL 5.2 make it a much more efficient organic modeler, they don't remedy the fact that Cinema 4D XL is mainly limited to basic modeling functions such as skinning, lofting, and extruding. Unlike LightWave, it lacks the essential power to model in a completely freeform way and create an object of any topology whatsoever. (Maxon says it plans to add advanced NURBS, metaballs, and other organic modeling tools to version 5.5.)

What about object manipulation and linking, so important for creating complex models and animations? LightWave continues to suffer from long-term design problems that make manipulating object hierarchies, especially those with bones, a royal pain. For instance, LightWave can't distinguish an unparented object and a child object whose parent has been rotated. The result is that when you're manipulating the child object from, say, the side view, any mouse movements you make that tell it to move from side to side often make it move backward instead. Rotating an object presents similar problems. The rotational z-axis, for instance, doesn't even accept mouse input. You must adjust it entirely within a numerical input box.

By contrast, Cinema 4D XL gets the prize for ease of use in the manipulation of objects (in every area but inverse kinematics). Many operations that are difficult to accomplish in LightWave are far easier and more intuitive in Cinema 4D XL. Some examples: When Cinema 4D XL parents one object to another, it recalculates the object's position to keep it in the same space relative to the world. LightWave simply ignores its current position and often places it somewhere else altogether. Cinema 4D XL can calculate rotational values in many different ways, depending on what is best for the current job. LightWave has only one rotational system, which results in the dreaded "Gimbal Lock," the effect of having one axis of rotation locked after you've rotated the object 90 degrees in another axis.



CINEMA 4D'S INTERFACE is generally well thought out and intuitive (and it looks like a Mac application!), but you're going to need a big monitor to hold all those windows.

The programs score a tie when it comes to deformation of objects. Cinema 4D XL now includes a full bones system and boasts one especially clever deformer feature, the FFD box. This deformation cage can enclose a complete object hierarchy, allowing you to push and pull the entire thing like Silly Putty. LightWave has also added some basic animatable deformations (such as bend, twist, and taper) to supplement its bones. Most impressive is the Morph Gizmo plug-in, which allows interactive blending of several morph targets using sliders—a boon for facial animation.

LightWave takes the prize for best IK. Not only is the once-arduous process of setting up bones now much easier—thanks to a set of clever plug-ins that allows you to "draw" bones in both Layout and Modeler—but its IK tools are much improved. LightWave can manipulate a long chain of bones quickly and accurately even without applying IK limits to each joint. LightWave can also now constrain the last bone in a chain to rotate like a goal object, which is useful for, say, keeping feet parallel to the ground. While Cinema 4D XL's IK tools are useful and functional, we found them more difficult to set up and use, and they lacked some of the interactivity of LightWave's.

Cinema 4D XL edges out LightWave when it comes to animation interfaces. Both programs take similar approaches, offering a basic timeline you can use to set keyframes for a given value. Systems for tweaking and editing motion are also nearly the same, using graphs of movement and acceleration. Cinema 4D XL, however, also has a very useful multiple-timeline interface that allows you to create new motion tracks at will and adjust keyframes dynamically. It also has a nicely implemented path effect that constrains an object to follow an already drawn path.

Picking a winner between such well-matched competitors is difficult. Underdog Cinema 4D XL is, frankly, better Mac software. With its Mac-like interface, superfast rendering, and direct import of LightWave scenes, it stands a chance of knocking LightWave out of the ring.—*Raf Anzovin*

LightWave 3D 5.6

GOOD NEWS: More stable than before. New modeling tools. Refined inverse kinematics. Particle animation, volumetric rendering, and Hypervoxels. Advanced morphing control. L-script programming language. BAD NEWS: Still un-Mac-like. Makes it difficult to manipulate objects in hierarchies. Most windows are still modal. Annoying gimbal lock.

Cinema 4D XL 5.2

GOOD NEWS: Mac-like interface. Very fast, high-quality renderer. Advanced particle animation control, volume rendering, and 3D textures. Path animation and timeline. COFFEE scripting language. Direct import of LightWave scenes. Multiple rotational systems. BAD NEWS: Modeler still underpowered. Inverse kinematics needs more interactive controls.

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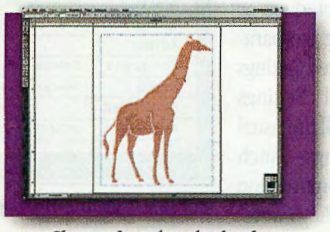

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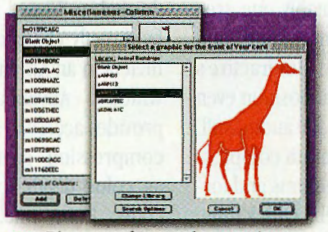
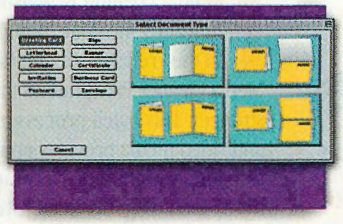


2 Place graphics and text using the step-by-step instructions.



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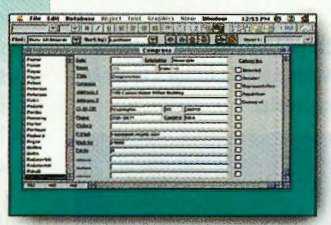

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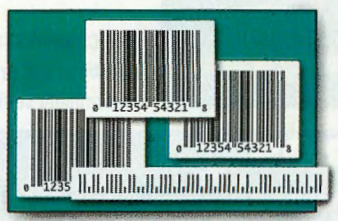

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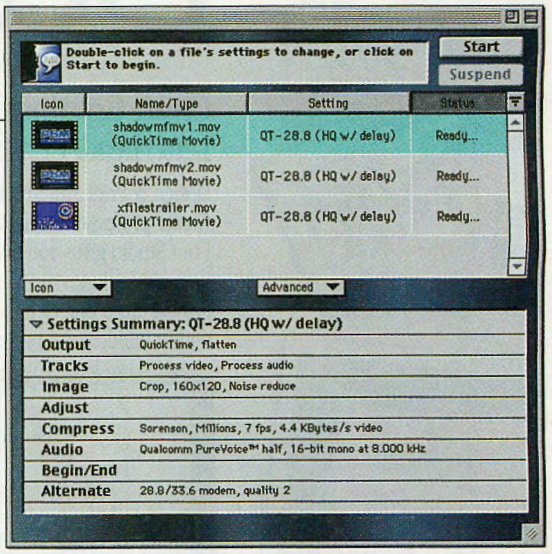
Media Cleaner Pro 3

MULTIMEDIA

COMPANY: Terran Interactive
CONTACT: 800-577-3443, http://www.terran.com
PRICE: $359 (SRP), $99 upgrade
REQUIREMENTS: 68040 or faster, System 7.0 or later, 10MB of RAM, QuickTime 2.5 or later, CD-ROM drive



MEDIA CLEANER PRO'S BATCH LIST WINDOW provides a Settings Summary and access to compression status and clips.

FIND A DEMO of Media Cleaner Pro 3 on The Disc.

Media creation is indisputably one area where the Mac remains strong, and the release of Terran Interactive's Media Cleaner Pro 3 makes that position even stronger. This batch processor for audio, still, and video media provides optimum compression for a variety of delivery mediums and formats, including CD-ROM, Web, QuickTime, RealMedia, JPEG, and WAV.

Although Media Cleaner Pro 3 can do many things very well, its greatest strength is QuickTime compression for Web or CD-ROM delivery. You have complete control over every facet of the compression process either through a Wizard interface or by directly changing the parameters in an Advanced Settings window. Advanced Settings provides access to all the usual compression settings—such as color depth, compression codec, frame rate, keyframes, and audio compression—that you would find in any QuickTime-compatible program. It's the other settings, many of which rely on QuickTime Pro 3, that really make this application shine. You can also determine contrast, brightness, image color, cropping and scaling, individual track rendering, separate audio codecs, head and tail fades, and watermarks for movies. You can save a group of settings for reuse.

If those settings sound daunting, Media Cleaner Pro 3 offers two easy ways to get great results. You can select predefined settings from a comprehensive list in the Advanced Settings window, or use the Settings Wizard.

Media Cleaner Pro 3 also introduces powerful new features that digital video mavens will love. You can set in and out points on any clips added to the batch list. It also features inverse telecine, which eliminates the 3:2 pull-down process in film-to-video transfers. Media Cleaner Pro 3 provides supports for nonsquare pixels and the CCIR 601 video standard that DV cameras and decks use. You can render movies destined for the Web with embedded URLs at the end to call up Web pages. Another impressive Web-centric feature is alternate rendering. Media Cleaner Pro 3 compresses two versions of a single movie—one for 28.8-kbps playback and one for ISDN playback, for example—then creates a single pointer movie that you can put in a Web page. To ensure that you can take immediate advantage of these features, Media Cleaner Pro 3 includes QuickTime Pro 3.

THE COMPRESSION WIZARD ASKS a series of questions and provides sample images to make determining settings easier.

Media Cleaner Pro 3's interface is much better than version 2's. Clip and track information is easy to access, and graphs can represent data rate and frame sizes for easy visual assessment. The Advanced Settings window has improved preset management with obvious buttons to create, save, and delete setting presets, which were annoyingly obtuse in version 2. Anyone who uses QuickTime, RealMedia, or sound files should own a copy of Media Cleaner Pro 3. No other app offers so many features or batch-compresses so many different media types.—*Rick Sanchez*

More Pros

Along with the professional releases of Media Cleaner and QuickTime, two pro codecs have come out: Sorenson Video Developer Edition and QDesign Music Codec Professional Edition. QuickTime 3 comes with limited versions of these new codecs, but serious users should consider upgrading to get the best video and audio quality for their media. Sorenson Developer provides better compression through variable bit rate encoding, a feature available only in Media Cleaner Pro, which determines the best way to compress a movie before compression actually begins. QDesign Pro renders at twice the speed and offers higher and lower bit rates. The end user needs only the regular version of QuickTime 3 to view or hear media created with the pro versions of these codecs. Sorenson Developer Edition is $499 and QDesign Professional Edition is $399, but you can purchase both as part of the QuickTime Codec Mega Bundle for $1,099 direct from Terran. The bundle also includes Media Cleaner Pro 3 and QuickTime 3 Pro.

GOOD NEWS: Includes QuickTime 3 Pro. Total control over the compression process. Dozens of presets for Web, CD, and DVD delivery. Lots of new features. **BAD NEWS:** Not available for PC. Just kidding, there's no bad news.

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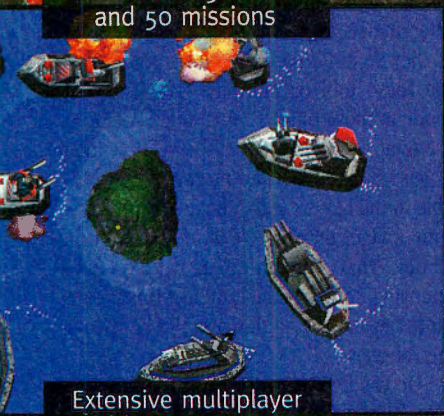

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Total Annhilation is a real-time war game featuring true 3D terrain and run-time generated 3D units. Tanks drive up and overhills, tilting and rocking with each bump in the landscape and impact with enemy weapons. Battle on diverse landscapes from lava worlds to vast island-dotted oceans. Build defenses high in the hills for a better view and a better shot. Planes bank and dive in intense air-to-air combat. Amphibious tanks drive into and dive underwater for surprise attacks.

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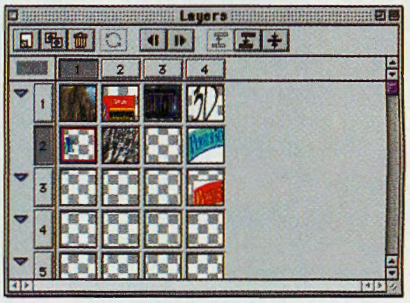
WebPainter 3

DESIGN & GRAPHICS

COMPANY: Totally Hip Software
CONTACT: 888-884-3447, http://www.totallyhip.com
PRICE: $89.95 (SRP)
REQUIREMENTS: PowerPC, System 7.1 or later, QuickTime 3 or QuickTime 3 Pro (included), 8MB of RAM, 15MB of free hard disk space, color monitor, CD-ROM drive

MAKING ANIMATED GIFS is easy with WebPainter 3. Here we made an alternative *MacAddict* GIF with onion skinning applied.

CHOOSE THE FILE FORMAT and preview the optimized version in this window.



THE LAYERS PALETTE APPLIES old-fashioned animation theory with cels and frames.

FIND A DEMO of WebPainter 3 on The Disc.

Before Pixar's *Toy Story*, artists conceived of animated feature films on transparencies. They could layer these on a background to create scenes, which they would then capture one frame at a time. Totally Hip Software's WebPainter 3, a Web animation and graphics application, operates according to the same principle. Although inveterate Adobe Photoshop and Adobe Illustrator users may initially have trouble getting used to the concept, this fine product is well worth the effort.

After reading the Getting Started Guide and the PDF manual, beginners will feel comfortable working with WebPainter 3. The quick tutorials explain Web graphic formats, as well as how to create images and animated GIFs in WebPainter. It's so easy you can have your page up and running in 20 minutes.

WebPainter 3 includes a wide variety of tools to help you create animated GIFs. Transitions, ranging from Explode to Matrix Wipe, add spice to your GIFs that you couldn't create manually. Settings for these transitions are easy to configure and fun to play with.

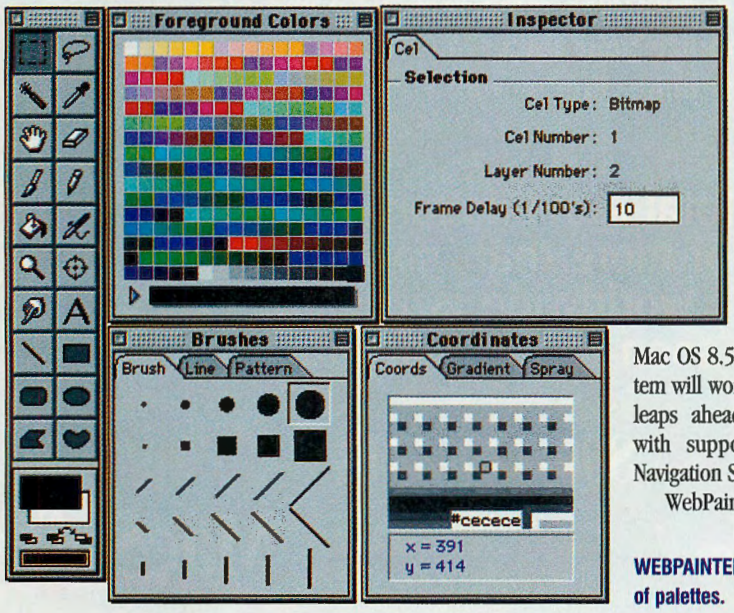
Implementing and understanding WebPainter 3's two modes may be a bit difficult. Each cel must be in either vector or bitmap mode, though with multiple cels per frame this is nothing more than a minor inconvenience. The Vector Tools palette lets you quickly create reeditable stars, rectangles, ovals, and so on. You can then skew, add gradients, or modify the objects. The Bitmap Tools palette includes old standbys such as the Spray Can and the Paint Bucket.

WebPainter 3 offers a unique help system that requires a Java-capable browser to navigate, but is as easy to use as any QuickHelp or the Apple Guide. Moreover, it gives you an idea of how the upcoming Mac OS 8.5's HTML-based help system will work. In fact, WebPainter 3 leaps ahead of most applications with support for OS 8.5's new Navigation Services.

WebPainter 3 includes a variety of extra perks, including QuickTime 3 Pro and thousands of royalty-free GIFs. You can incorporate them into your Web pages or animations, or add them to the Image Library for drag-and-drop access to your favorite GIFs from within a WebPainter palette.

WebPainter 3 isn't all fun and games, though. There are a few quirks that are inconsistent with other applications and Mac interface standards. Cels don't act as layers as they do in Photoshop—you must first use the Lasso tool or Marquee tool in bitmap mode to move objects. Also, when you move a bitmapped image out of the window area, it gets chopped off, and no file size is available in the Export dialog box. You must save your image, then check the file size in the Finder. That said, these quirks are a bit annoying, but fortunately Totally Hip is committed to improving this product in upcoming releases.

Do you need WebPainter 3? If you already own Adobe ImageReady or Macromedia's Fireworks, then no. However, if you need a quick and easy-to-use tool to create optimized animated GIFs for the Web, then yes, absolutely.—*Erik J. Barzeski*



WEBPAINTER 3 FEATURES a plethora of palettes.

GOOD NEWS: Great use of cels and frames. Wide range of tools and effects. Vector and bitmap modes.
BAD NEWS: Professionals may need more features. Some annoying interface quirks.

A Personal Note from MacOnLine

Dear Beaufort, SC; Hackettstown, NJ; Naples, FL; Corpus Christi, TX; Kansas City, KS; Clarksville, TN; Tuscaloosa, AL; Nashua, NH; Sonora, CA; Coos Bay, OR; Robinsonville, MS; Kingston, NY; Niceville, FL; McMinnville, OR; Galveston, TX; Aberdeen, SD; Bangor, ME; Grantsburg,WI; Abilene, TX; Addison, IL; Albany, OR; Anderson, SC; Anniston, AL; Ashland, KY; Auburn, Al; Bergenfield, NJ; Biloxi, MS; Blane, MN; Blue Springs, MO; Bowling Green, OH; Bowling Green KY; Boyton Beach, FL; Brook Park, OH; Bossier City, LA; Brownsville, TX; Bryan, TX; Chatham, MA; Chickopee, MA; Cheyenne, WY; Clovis, NM; Covington, KY; Crystal, MN; Columbia, MO; Columbia, SC; Columbia, TN; Columbus, GA; Columbus, MS; Columbus, OH; Columbus IN; Coon Rapids, MN; Cupertino, CA; Decatur, Al; Dubuque, IA; Durham, NC; Del City, OK; Danbury, CT; Destin, FL; Dunedin, FL; Downers Grove, IL; Easton, PA; El Dorado, AR; Elizabeth, N.J.; Elkhart, IN; El Paso, TX; Elmhurst, IL; Elgin, IL; Enid, OK; Erie, PA; Evansville, IL; Ferndale, MI; Florence, Al; Florence,SC; Fort Smith, AR; Frankfort, KY; Frederick, MD; Freeport, Il; Freeport, NY; Garkand, TX; Gary, IN; Glendora, CA; Grand Forks, ND; Greely, Cp; Great Falls, MT; Gulfport, MS; Glendale, AZ; Gresham, OR; Hattisburg, MS; Harvest, AL; Hopewell, VA; and all other points in Wyoming, Idaho, Delaware, Maine, Arizona, Colorado, Montana, Nebraska, Okalahoma, Mississippi, Tennesee, Georgia, Florida, Alabama, Washington, Oregon, Kansas, Missouri, Pennsylvania, West Virginia, Virginia, North Carolina, South Carolina, Maryland, Rhode Island, New York, North Dakota, South Dakota, Wisconsin, Connecticut, Ohio, Massachussetts, Iowa, Vermont, New Hampshire, New Jersey, Michigan, Minnesota, Louisiana, Arkansas, New Mexico, Kentucky, Indiana, Illinois, California, Nevada, Utah, and Texas, everywhere in the continental United States.

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HARDWARE

COMPANY: IXMicro
CONTACT: 888-467-8282 or 408-369-8282, http://www.ixmicro.com
PRICE: $118 (SRP)
REQUIREMENTS: PCI-based Power Mac, System 7.5.3 or later, QuickTime 2.5 or later, 16MB of RAM, free PCI slot

photo by Aaron Lauer

LOOKING TO KILL SOME TIME in front of the tube? Do it with ixTV and your Mac, and you might get some work done—or not.

Consider it a high-tech addition to the slacker's arsenal—television right there on your Mac's desktop. After all, nothing stimulates creativity (and kills some time) like a few old Tex Avery cartoons. That's where the ixTV comes in handy. Say, oh, some powerful political leader gets in trouble, and the bombs start falling. Without leaving your Mac, you too can watch Sam Donaldson and his amazing hair talk about the implications. Pretty spiffy.

As with most hardware, setting up the ixTV isn't as easy as installing an application, although the ixTV software is amazingly easy to prepare. Just drop an extension into your System Folder and copy the ixTV Desktop application to your hard drive, and you're ready to go. The hardware is considerably more difficult. First, you have to open up your Mac's case and install the ixTV PCI card. While this isn't too difficult, it only gets the video going. To get the audio going, you have two options: Use an audio cable to route the ixTV's audio out into the Mac's microphone in (which eliminates the ability to plug in a microphone at the same time), or use the included patch cables to reroute your Mac's CD audio through the ixTV card. The second option is preferable, but it involves removing an existing internal cable and replacing it with two others—not for the faint of heart. Still, once we installed the patch cables correctly, the audio worked flawlessly.

Once you've installed the software and hardware, you'd think it would be a matter of firing up the application and watching some TV, right? Wrong. For some reason, the ixTV Desktop application requires an activation key, which you get by calling IXMicro and giving an employee the serial number on the PCI card. You'd better write that down before you install the card and put your Mac back together, or you'll be taking another trip down hardware lane.

WHERE'S MY PIZZA? HULK SMASH if it not here in 30 minutes or less! We captured this rare rant of Dr. Bruce Banner with the video capture feature. Although he's a big green brute, his hair is quite stylish, don't you think?

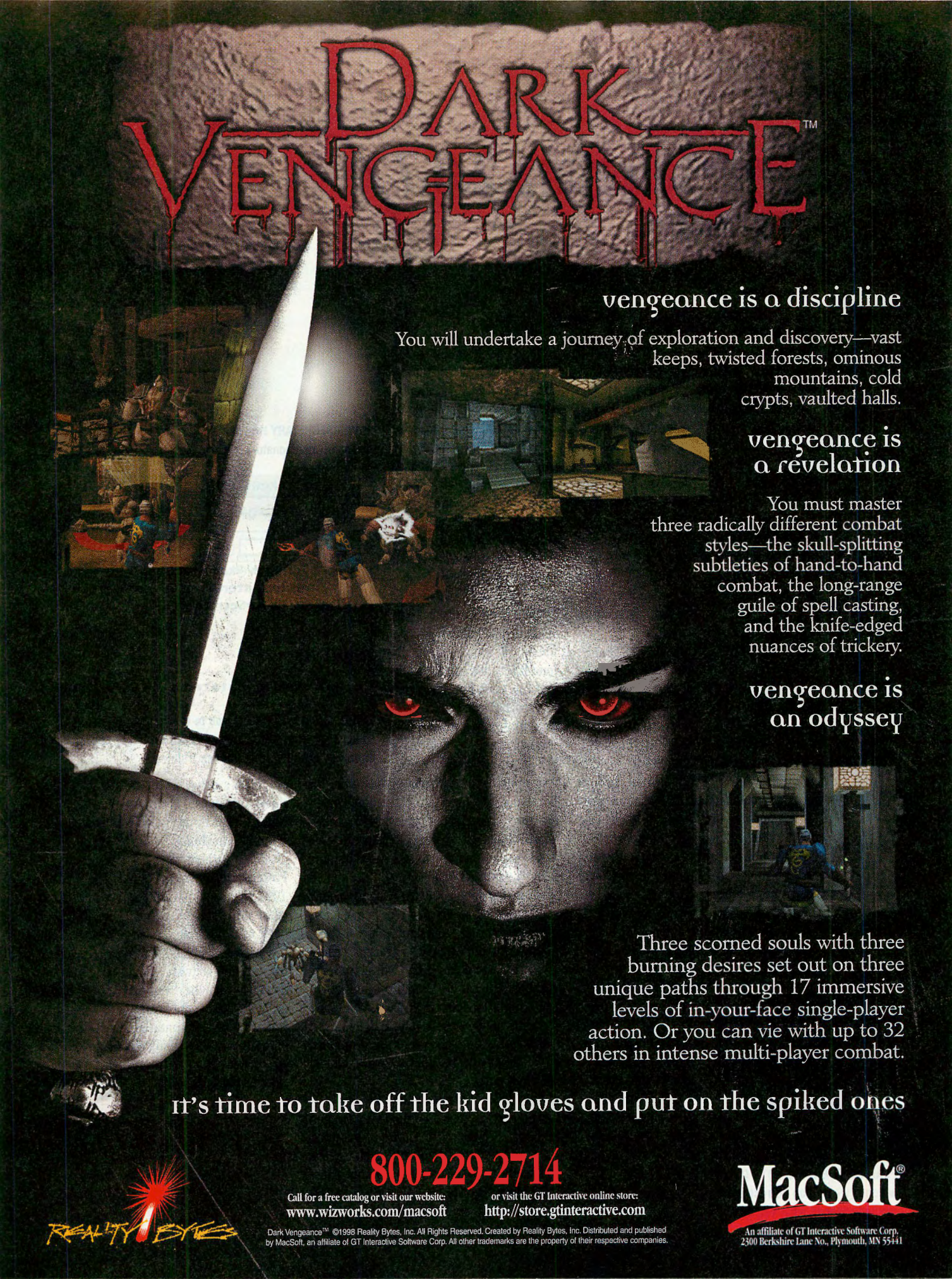
After installation, the ixTV works just as it should—for the most part. Video comes up in its resizable window (from itty bitty to great big), and the controls are intuitive and responsive. Setting up channels is just a matter of clicking a button, and the ixTV goes to work scanning existing channels for valid signals, and recording those channels as active. The ixTV Desktop app also lets users capture freeze frames and live video, and this function works great as well. We were able to capture some nifty Animaniacs clips to put right next to our Dan Rather collection. The one feature that didn't work well was Closed Captioning. When launched, the ixTV Desktop application cited slow PCI bus performance as the reason why Closed Captioning wouldn't work. With the Closed Captioning features in ixTV Desktop, you can read and save transcripts, and have the application monitor those transcripts for a set of words, so if someone mentions iMac, for example, the application saves the transcript. We fiddled around with a SCSI host adapter card installed in the same Mac and made it work—sort of. We were able to get about 1 word out of 10, perhaps because of a bad signal. Still, when it hit a hot word, the application did its job and saved the transcript.

For the price, ixTV is pretty cool. It doesn't offer quite the same depth of features as ATI's Xclaim TV (see review, Oct/98, p64), but the $90 Xclaim TV requires an Xclaim VR video card (or a G3 with the AV option), which will cost you. If you're looking for an inexpensive way to get TV (or video from a camera or VCR) onto your Mac's desktop, ixTV offers a great solution. Watch your productivity plummet!—*David Reynolds*

ALTHOUGH HE LOOKS FUZZY, that tie our president is wearing is mighty sharp. With a better antenna, he would be, too. Maybe that's been the problem all along.

GOOD NEWS: TV on your desktop. Video and still capture work well. Includes external S-video and composite video capture. Tuner setup easy to do. **BAD NEWS:** Involved hardware setup. Must call IXMicro for activation key. Closed captioning spotty.

DARK VENGEANCE™



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vengeance is a revelation

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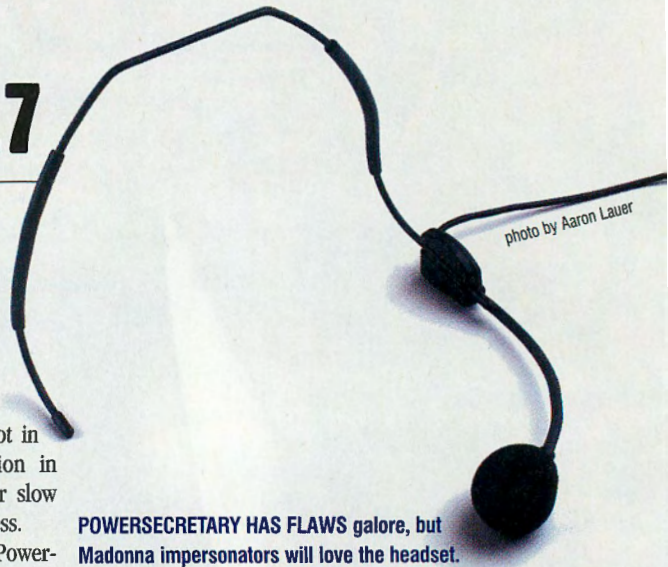
PowerSecretary 2.0.7

PRODUCTIVITY

COMPANY: Dragon Systems
CONTACT: 800-825-5897, http://www.dragonsystems.com
PRICE: $395 (SRP)
REQUIREMENTS: System 7.5 or later, 24MB of RAM (32MB recommended), 25MB of free hard disk space

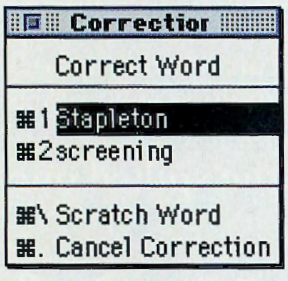


POWERSECRETARY HAS FLAWS galore, but Madonna impersonators will love the headset.

I am writing this without touching the keyboard. Magic? Nope—I'm using Dragon Systems' PowerSecretary Power Edition 2.0.7, a voice-recognition dictation software that may be the answer for Mac users suffering from repetitive stress injuries. PowerSecretary Power Edition lets you dictate text and use voice commands to work in most applications. However, the program's major flaws outweigh its benefits. The pauses it requires between each spoken word, the intense and difficult training, the painful installation, and the poorly written user guide make it a good buy only for people who absolutely need it.

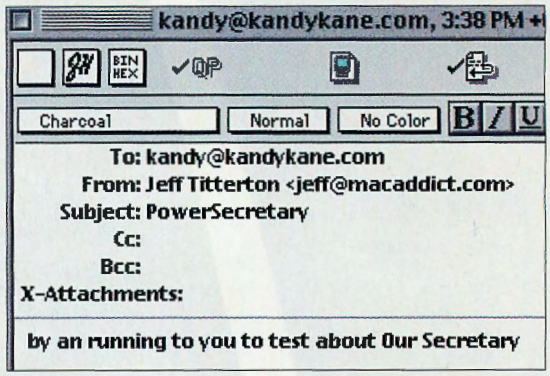
In today's fast-paced world of double-click installations, the idea of spending long hours *installing* an application is unacceptable. Well, that's what you'll be doing with PowerSecretary. The installation instructions that come with the user guide are incorrect, and even after you find the correct instructions on the Web site, you're in for a lot of work. We're talking page after page of complex instructions that reek of inadequate product testing and poor documentation.

Once you've got the program installed and your headset on, you're ready for the initial training, which consists of an hour-long session of speaking a series of phrases and words. This is heaven compared to the intense real-world training PowerSecretary requires. Prepare yourself for weeks of exasperating repetition, corrections, and manual changes before you can expect accurate voice recognition. The user guide is also not well organized and contains some major mistakes—such as the missing "To Choose a Word Not in the Choice List" section in chapter 3—that further slow down the training process.



PLAN ON SPENDING LOTS OF TIME in the Correction window, where you correct PowerSecretary when it misunderstands what you say.

When I first used PowerSecretary, I experienced 30 percent accuracy when dictating one-syllable words and 10 percent accuracy for longer words. After one long day of work, those numbers began to improve, and after three days PowerSecretary understood 60 percent of my words and transcribed at about 35 words per minute. If you're patient, the long hours of training pay off. You can teach PowerSecretary to recognize your voice quite well, so that even when it does misunderstand what you say, it will generally pop up the word you want as an alternative option in the Correction window. However, because PowerSecretary uses discrete speech recognition, which requires a short pause between each word, you'll never get up to a speed of more than 55 words per minute.



I SAID, "I AM WRITING to you to tell you about PowerSecretary." This is what PowerSecretary heard. Things improved after hours of intense training.

The best thing about the program is that you can do more advanced work using text macros, built-in command macros, and AppleScript and QuicKeys macros. These allow you to add and delete words from the vocabulary, train the program to disregard background sounds such as sneezes, and move among files using voice commands. If you take the time to master these options, you'll eventually be able to work almost sans keyboard.

As much as these capabilities impress, PowerSecretary can't compare to Dragon Systems' latest Windows product, NaturallySpeaking. NaturallySpeaking lets you speak to your computer without pausing between words, netting you up to 160 words per minute. Compare that to PowerSecretary's paltry 55 words per minute—those little pauses really add up! Of course, NaturallySpeaking is only available for Windows machines.

When Dragon Systems came out with PowerSecretary Power Edition 2.0.7 back in 1997, it cost $695, which seemed like a great deal, since version 2.0 cost $2,495 back in 1995. Now version 2.0.7 costs only $395, so if you can't wait a second longer for dictation software, then it (or its pared-down cousin, the Personal Edition, which costs $195) may be worth the money. But if you want the fast continuous speech recognition NaturallySpeaking offers, you'd better get on the phone and start bugging Dragon Systems for a Mac version.—*Jeff Titterton*

GOOD NEWS: Affordable. Works with most applications and the Finder. Uses AppleScripts and other macros.
BAD NEWS: Difficult and complex training. Terrible user guide. Much slower than Dragon's latest Windows application.

REDJACK

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- Gamefan

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- PC Gamer

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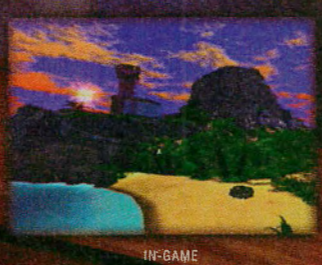
CINEMATIC

Stunning scenery



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CINEMATIC

Non-stop action

IN-GAME

TEEN T AGES 13+ ESRB

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reviews

ix3D Road Rocket

photo by Aaron Lauer

HARDWARE

COMPANY: IXMicro
CONTACT: 888-467-8282 or 408-369-8282, http://www.ixmicro.com
PRICE: $349 (SRP)
REQUIREMENTS: PowerBook G3 Series with CardBus, Type III PC Card slot, System 8.1, 16MB of RAM

IT'S NOT EXACTLY A PATRIOT MISSILE (it's more of a Titan booster), but the Road Rocket gives your G3 Series PowerBook the video support it should have had all along.

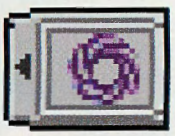
The ix3D Road Rocket brings to the PowerBook G3 Series what that machine should have had from the start—true multiple-monitor support instead of the lesser video-mirroring ability it currently features. Just install the Road Rocket card and software, connect a second monitor, and in only a few minutes your PowerBook G3 Series sports twice the desktop real estate it formerly possessed.

Installation couldn't be simpler. Run the installer from the CD-ROM (which also provides a passable software bundle, including MetaCreations' Kai's Power Show, Adrenaline Charts SE, and a few demos), insert the Road Rocket into the PC Card slot, connect a monitor, and you're all set. Because the Road Rocket is a Type III PC Card, it occupies both slots, so forget about using a PC Card modem and the Road Rocket at the same time.

THE MAIN SOFTWARE INTERFACE for the Road Rocket sports some spiffy 3D buttons, but the controls behind them are mostly set-and-forget in nature.

Once inserted, the Road Rocket sticks out well beyond the side of the PowerBook, which is a good thing. The external end of the card has a heat sink to dissipate all the excess heat that video work generates, and it would be a bad idea to dump that heat back into a crowded PowerBook case. A word of caution, though—after a long period of use, the heat sink gets hot to the touch, so be careful where you put your fingers. It won't burn you, but it's not comfortable.

The Road Rocket's performance was good but not great—understandable for something that does its work through a PC Card interface. Without the Road Rocket installed, the PowerBook scrolled through a 700K document in just over 12 seconds. With the Road Rocket installed, it took 14 seconds for the same scroll on either the PowerBook's built-in display or the external AppleVision 1710 we used. Norton Utilities' benchmark suite showed a similar slight degradation of video performance. However, in the real world the slowdown was hardly noticeable, and overall it's a small trade-off for all that extra screen real estate. The Road Rocket is capable of providing up to 1280 by 1024 resolution at thousands of colors and an 85Hz refresh rate—pretty cool.



THIS ICON DEPICTS THE ROAD ROCKET in the virtual world of the Macintosh.

The bundled control panel software gives you the power to tweak Road Rocket's settings—for example, enabling 2D or 3D acceleration and that sort of thing. The settings are pretty minor (if you happen to be a video guru, there might be something fascinating here), so it's a set-and-forget affair. The card-and-software combination does provide one other useful feature—hardware pan and zoom. Press a key combination, and it's as if you've taken a magnifying glass to your screen. The display zooms in, and you can pan with your cursor. This is great for those who need pixel precision but don't want to change view magnification settings to get it.

The Road Rocket only works with the G3 Series PowerBooks (those that have a CardBus slot), a bit of a bummer for those who own earlier 'Books and would like to have the benefits of a second monitor. But for those who own the right laptop, the ix3D Road Rocket is a true boon. It's the missing link that turns a high-power laptop into a dual-use Macintosh great for traveling and graphics work alike.—*David Reynolds*

Best of Both Worlds

Road Rocket serves as the heart of a do-it-yourself dock, hearkening back to the good ol' Duo days. Set aside a keyboard and a monitor with built-in ADB connectors (such as the AppleVision 1710), and you can take your G3 Series PowerBook on the road and bring it back to home base. Here are the elements:

- Connect the monitor to the Road Rocket.
- Connect a keyboard and mouse to the monitor's ADB port.
- Leave a modem and/or network cable on the surface where the PowerBook will rest.
- Set up the PowerBook's power adapter so that the plug is near the modem cable.

When you're ready to dock, plug the Road Rocket into the PowerBook; plug the ADB cable from the monitor into the PowerBook's ADB port; hook up the power adapter, modem, and any network connections; open the PowerBook's lid; and press the power key on the standard keyboard. There you have it!

GOOD NEWS: True Mac-like second monitor support. Easy setup. Hardware pan and zoom. Lots of colors at high resolutions. **BAD NEWS:** Heat sink gets really hot. Video performance takes a tiny hit.

Lode Runner 2

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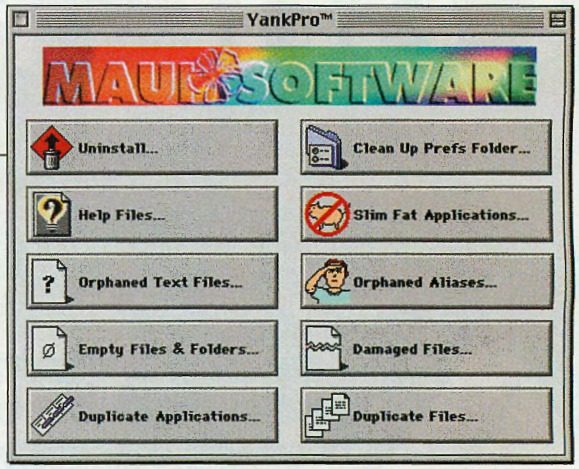
reviews

YankPro 3.0

UTILITIES

COMPANY: Maui Software
CONTACT: 408-689-9314,http://www.mauisoftware.com
PRICE: $29 (SRP)
REQUIREMENTS: System 7.0 or later, 4MB of RAM, 4MB of free hard disk space



YANKPRO 3.0 LOOKS LIKE Spring Cleaning, but doesn't offer as many features or safeguards.

Launching YankPro 3.0 invoked déjà vu, as this utility bears a striking resemblance to Aladdin Systems' Spring Cleaning (see review, Feb/98, p62). Unfortunately, YankPro suffers from many of the same problems that afflict its competition, including a clumsy interface, questionable results, and dubious value.

YankPro allows you to uninstall applications and related files, delete duplicates, clean out the Preferences folder, slim down fat binary applications, trash Apple Guides, delete and restore orphaned aliases and text files, and get rid of empty files and folders. After YankPro briefly scans the specified volumes, a Search Results window lists the files and folders that meet your criteria. Search Results resembles the Items Found window that appears when you use Find File, although you can't change the sort order, nor can you directly manipulate the items in the list—for example, dragging them to the Trash or double-clicking to open them.

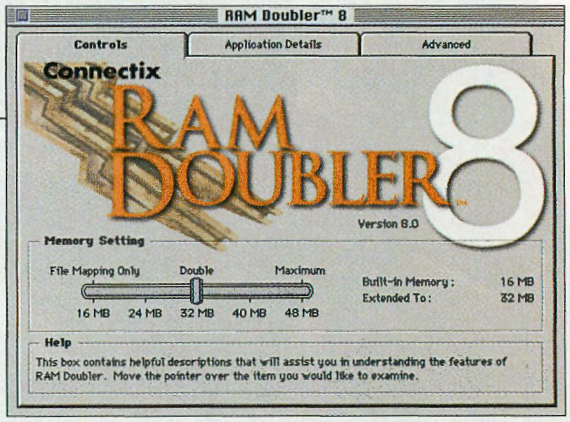
YankPro helps identify *candidates* for the Trash, but the program's paucity of information (its electronic documentation is minimal), restrictive interface, and lack of automation make using it frustrating and dicey. It's $20 less than Spring Cleaning, but doesn't offer as many features or safeguards against accidentally deleting important files.—*Owen W. Linzmayer*

GOOD NEWS: Cheaper than Aladdin's Spring Cleaning. **BAD NEWS:** Clumsy, restrictive interface. No printed manual; electronic documentation is barely adequate. No safeguards.

RAM Doubler 8

UTILITIES

COMPANY: Connectix
CONTACT: 800-950-5880 or 650-571-5100, http://www.connectix.com
PRICE: $45 (street)
REQUIREMENTS: 68030 or faster Mac, System 7.1.2 or later, 8MB of physical RAM



THE NEW CONTROL PANEL sports the fashionable tabbed look, hiding the more esoteric features from timid users.

Time was when Connectix's RAM Doubler seemed like an ingenious piece of software engineering that magically doubled, and later tripled, your Mac's available memory. However, as the virtual memory built into the Mac OS gets better, and real RAM upgrades grow cheaper, is RAM Doubler still a cost-effective way to boost your Mac's memory allotment? On balance, probably not.

RAM Doubler 8 remains a stable and performance-neutral memory extender. In testing RAM Doubler 8 on a couple of aging Macs, we found that the machines started up, launched applications, and ran scripts about as fast as they did using Mac OS 8.1's virtual memory, and only slightly slower than they did with no virtual memory at all. Though Connectix's memory-shuffling and compressing techniques don't give RAM Doubler an edge over Apple's disk access–intensive virtual memory, at least RAM Doubler doesn't hog tens of megabytes of disk space.

Even at its current sub-$50 price, RAM Doubler is hard-pressed to compete with a genuine RAM upgrade. We tested it on a desktop Mac and a PowerBook with 16MB of RAM apiece, and at current prices we would be able to double these machines' physical RAM for $30 and $60 respectively, or triple it for $50 and $100 respectively. While Connectix's offering is still competitive for PowerBooks or for desktops with significantly more RAM, many prospective buyers would be better advised to spring for a real RAM upgrade. Others may opt for the disk space–intensive, but otherwise performance-equivalent, virtual memory built into the current Mac OS.

You may wonder what new features Connectix has added to justify RAM Doubler's massive version-number increase—from 2 to 8. The company says the new version is better optimized for Mac OS 8 and Office 98, but the only change immediately apparent is a spruced-up control panel with some new performance statistics.—*Mark Simmons*

GOOD NEWS: Negligible performance hit. Transparently increases memory. **BAD NEWS:** No longer faster than Apple's virtual memory. In many cases, no longer cheaper than real RAM. New statistics displays are obscure and confusing.

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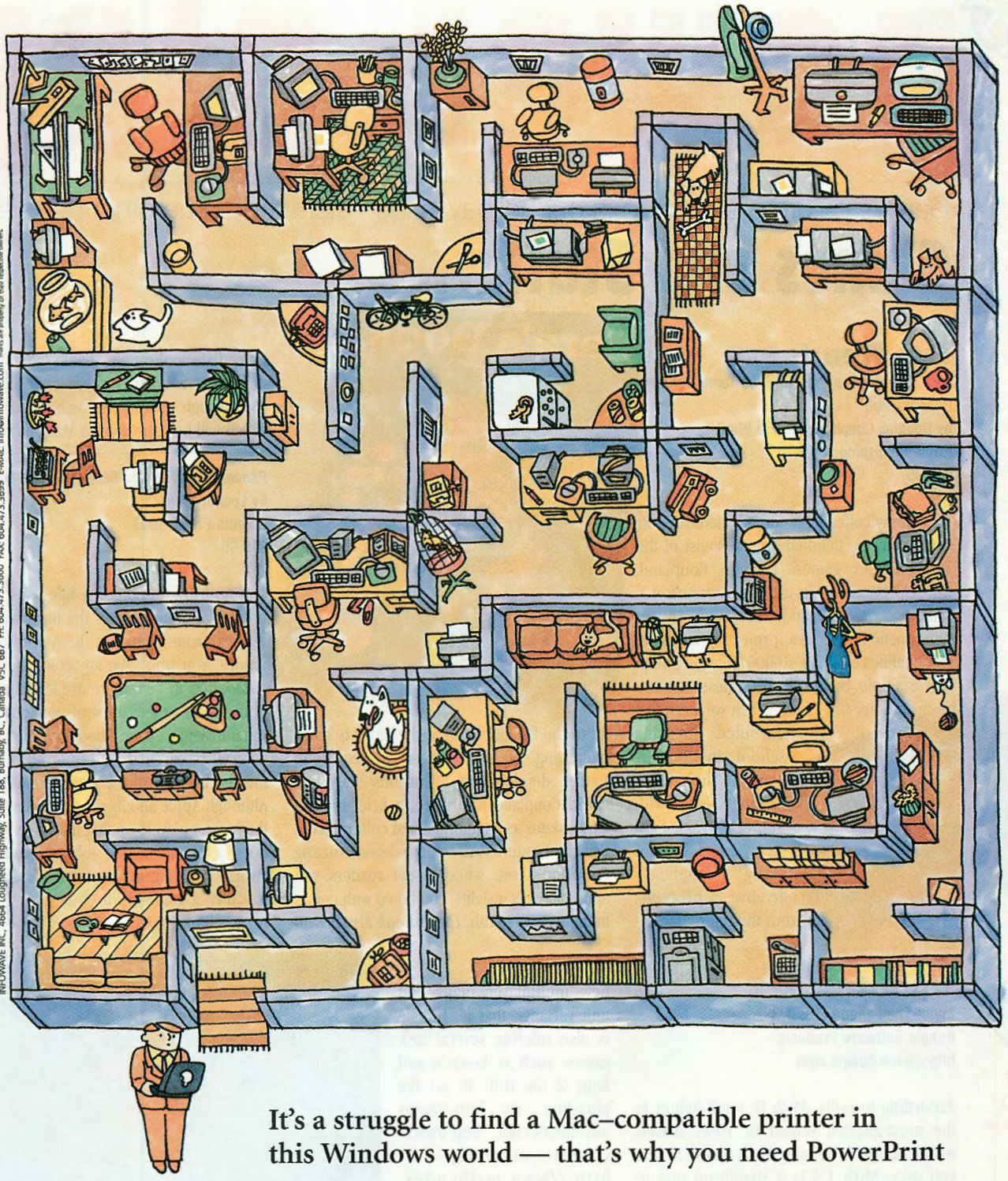

It's a struggle to find a Mac–compatible printer in this Windows world — that's why you need PowerPrint

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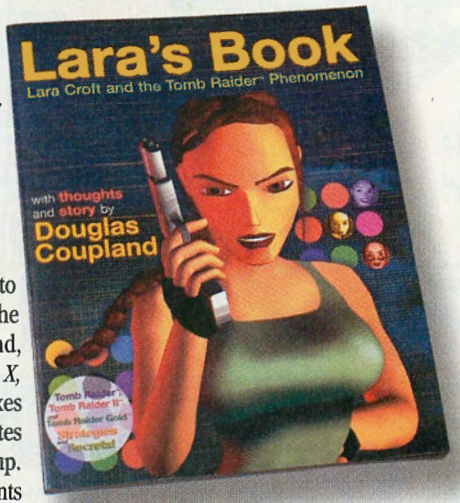
power play

Games galore are coming in our holiday issue—here are some other goodies.

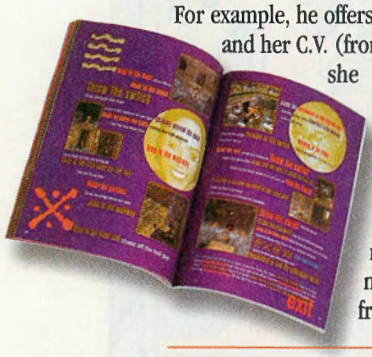
Games and Stuff...

Fun Reads

Lara's Book: Lara Croft and the Tomb Raider Phenomenon
by Douglas Coupland and Kip Ward
Prima Publishing, 1998
$19.95



This glossy coffee-table tome is dedicated to Lara Croft, the fictional archaeologist of the Tomb Raider games. Douglas Coupland, whose previous works include *Generation X, Shampoo Planet,* and *Microserfs,* waxes cyberpoetic about Lara, projecting attributes and qualities onto the 40,000-polygon pinup. For example, he offers Lara's measurements and her C.V. (from which we learn that she attended finishing school in Switzerland). The author imbues Lara with subjectivity: Lara says, "I feel kind of meshy." Coupland's narrative proceeds from the utterly fantastic to the factual. Frankly, the latter is more interesting, because you get to see Tomb Raider development at various stages of work. Coupland also offers a brief look at Lara's status as an international cultural icon. Critical readers will enjoy deconstructing Coupland's text, while casual readers will appreciate his insights, combined with colorful images. Oh, yeah, *Lara's Book* also has an immediate application. Thanks to Kip Ward, it doubles as a unique strategy guide that walks you through each of the Tomb Raider games, which will be ready for the Mac this fall.—*JH*



Phoenix: The Fall and Rise of Video Games
by Leonard Herman
Rolenta Press, 1997
$19.95

This no-frills, no-nonsense title is a spiffy reference guide that traces the history of video games from Spacewar to Mario 64 and more. You won't see any color pictures in *Phoenix;* in fact, there are few pictures at all. Don't expect a lot of opinion or personal insights, either. *Phoenix*'s worth lies in its well-researched and thoroughly documented account of the video game industry. Although Apple and its progeny aren't exactly the biggest players on that marquee, Herman does a commendable job of placing our favorite company in a sociohistorical context. If you're a game-history buff, then give this book a look.—*JH*

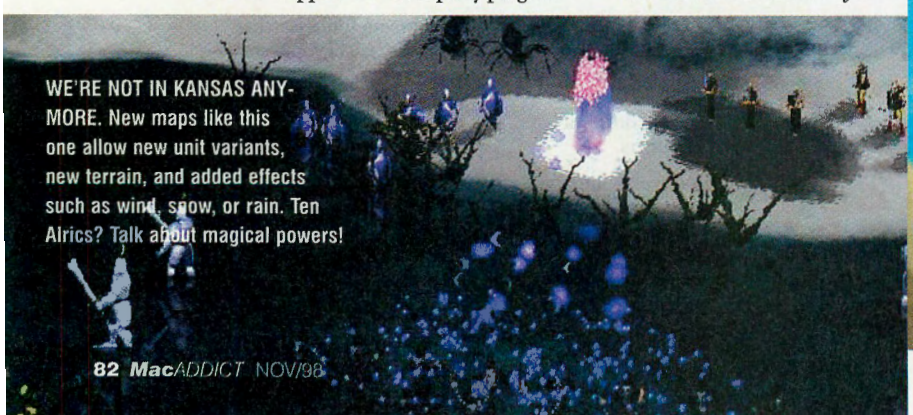
photos by Aaron Lauer

Update

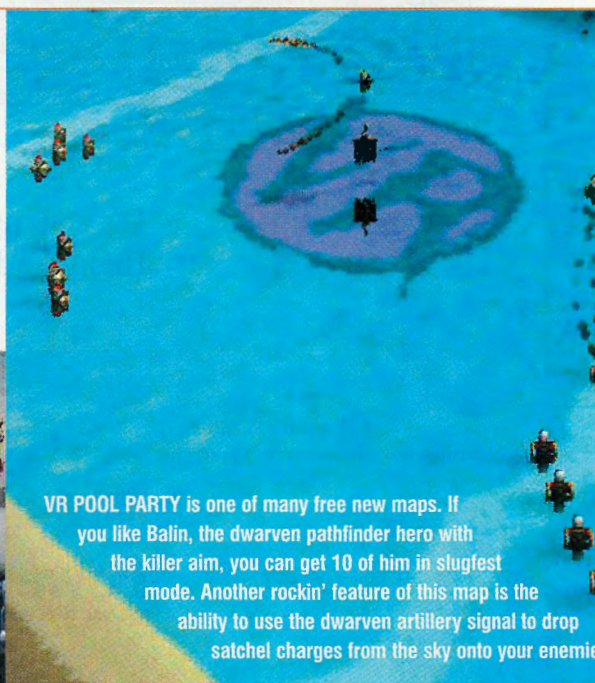
Myth: The Fallen Lords 1.3
Bungie Software Products
http://www.bungie.com

FIND THE MYTH 1.3 UPDATER on The Disc.

According to polls, Myth II: Soulblighter is the most-awaited sequel of 1998. Meanwhile, Bungie is keeping Myth I fresh to tide you over. Myth 1.3 is a significant update that adds support for third-party plug-ins—new multiplayer maps and unit variants, that is. Bungie is also offering several new games, such as Assassin and King of the Hill. To get the plug-ins, visit http://maps.mythnews.com, http://www.vrabbits.com/maps, or http://www.mythcodex.com/resources/canon.—*JH*



WE'RE NOT IN KANSAS ANYMORE. New maps like this one allow new unit variants, new terrain, and added effects such as wind, snow, or rain. Ten Alrics? Talk about magical powers!



VR POOL PARTY is one of many free new maps. If you like Balin, the dwarven pathfinder hero with the killer aim, you can get 10 of him in slugfest mode. Another rockin' feature of this map is the ability to use the dwarven artillery signal to drop satchel charges from the sky onto your enemi

Teasers

Daimyo: Warlord of Jihpen
http://www.daimyo.com

It's no secret to the entire Myth online community that someone has been working on a conversion based on the Myth engine. The Daimyo project focuses on fifteenth- and sixteenth-century Japan—specifically the Sengoku Jidai, or Age of the Country at War. The concept looks awesome, and we hope the project reaches maturity very soon.—*JH*

Cheats

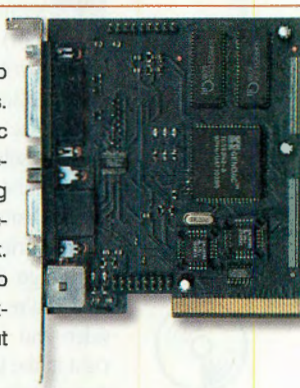
Real Help for Unreal

Press the tilde key (~) and type:

God for invincible mode
Fly to fly
Walk to walk again
Allammo to get 999 rounds for your current weapon
Ghost to go through walls
Summon eightball for the eightball
Summon flakcannon to get the flakcannon
Invisible 1 to turn invisible

News

After the layoffs at TechWorks, we thought there would no longer be Voodoo-based accelerators for Mac gamers. Thankfully, German video card wunderkind Village Tronic has made MacMagic available to us. At a totally game-friendly price of $99, MacMagic enhances the 3D gaming experience, raising it to another level. After playing Glide- and RAVE-enabled games, you'll never want to go back. What's so special about MacMagic as opposed to TechWorks' Power3D? MacMagic features special tweaking—overclocking, that is. To find out more, check out Village Tronic at http://www.villagetronic.com.



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how to

Premiere and AppleScript—ever thought about playing with your Mac for a living?

Premiere Your Home Movies

by Robert Capps

Making QuickTime movies is one of the keenest ways to waste time (or make loot) with a Mac. Anybody can become writer, director, and star with relative ease, provided he or she owns a video camera, a Mac capable of capturing video, and the right software.

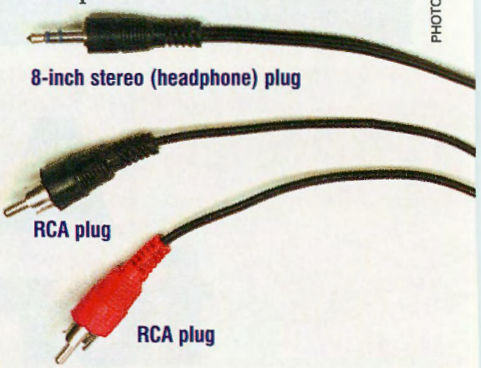
The first requisite—a video camera—is obvious enough. As for the second, a video capture–friendly Mac, there are a couple of ways to go. If you happen to have an AV Mac, then you're set. These Macs come with RCA video and sound input (and output) jacks right in the back of the machine. If your Mac doesn't have RCA jacks, you will have to opt for a PCI solution (if you don't have a PCI-based Mac, you'll have to opt for a new Mac).

For less than $150, any Mac with an open PCI slot can be granted video-in capabilities via IXMicro's ixTV card (see review, p74). This card works fine for small-size captures but breaks up at larger sizes. The breakup, of course, is proportional to how powerful your system is. ATI's Xclaim VR PCI card (see review, Mar/98, p65) costs around $250, but because of its architecture it can handle larger screen films—equivalent sizes to a native AV Mac. Power Mac G3 owners take note: There is a bug in either Apple's G3s or ATI's drivers (we couldn't figure out which) that prevents you from using your Mac G3's sound input and the ATI card at the same time. To fix this you need a patch released by Apple and found on The Disc. Of course, if you own a Power Mac G3, you may want to skip the ATI card altogether and opt for the multimedia-input hardware/Ultra SCSI PCI card combination offered by Iomega's Buz Multimedia Producer (see review, p56). The Buz retails for around $300 and requires a Power Mac G3, but it has an MPEG decoder for bigger, cleaner capture.

Getting the ixTV or Xclaim VR card tied to your camera requires a video RCA connection cable, and a stereo RCA-to-single-headphone-plug cable for connecting the camera to your Mac's native sound input. Buz has normal RCA sound inputs like those on an AV Mac, so you'll need one video RCA cable and one normal audio RCA cable.

As for the software part, Adobe's version 5.0 revamp of Premiere makes the program very intuitive and very usable for even the greenest moviemaker. There are other less expensive video editors out there, but Premiere offers a lot of power *and* ease of use. We've included a tryout of Premiere 5.0 on The Disc, so you can sample the program for yourself. Of course, this tryout won't let you capture video, export, or save. But get your hands on a full version of Premiere, grab your camera, plug in those RCA cables, and you'll be ready to make your own personal video opus.

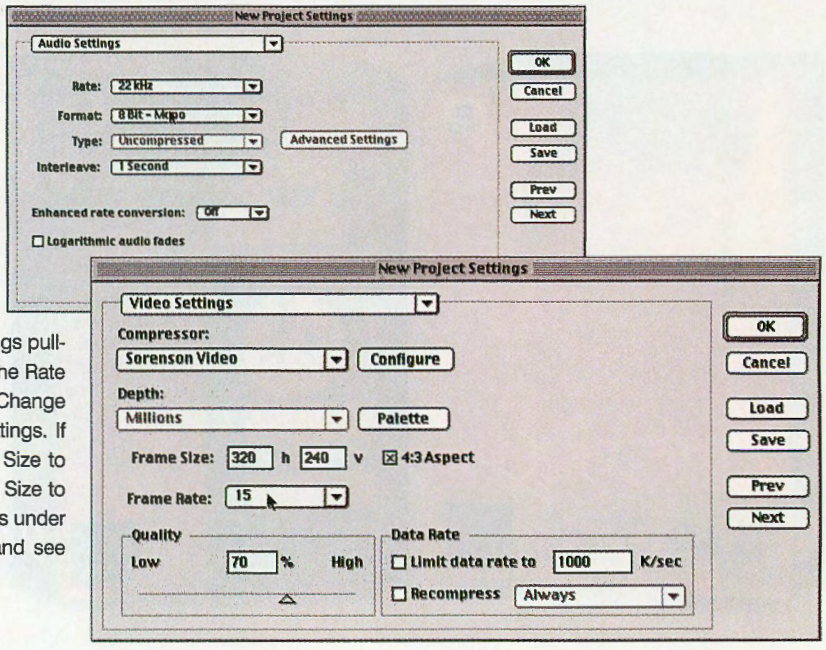
PHOTO: KEN BOUSQUET



FIND A TRYOUT OF PREMIERE and the G3 sound patch on The Disc.

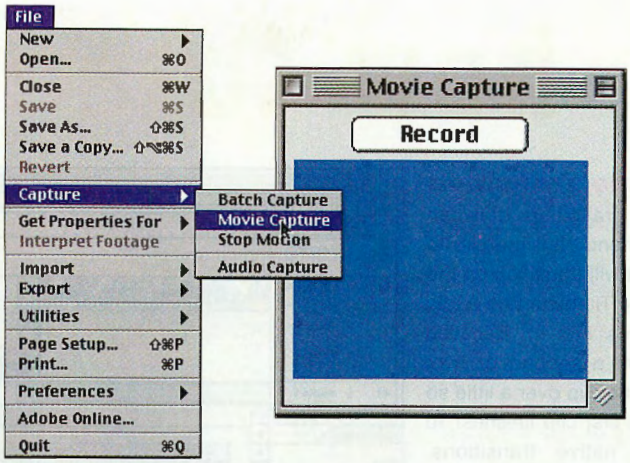
1 Set the Size

When you start Premiere, it presents you with a window of options. You can leave these settings at their defaults, but in order to keep your final movie at a reasonable size, you may want to reduce the video and sound capture rates. To do this, select Video Settings from the settings pull-down menu at the top (its default is General Settings). Choose 15 from the Frame Rate pull-down menu, and Sorenson Video from the Compressor menu. Then change the settings pull-down menu at the top to Audio Settings. Set the Rate to 22kHz and the Format to 8-bit stereo mono. Change the Settings menu again to read Capture Settings. If you are using the ixTV card, set the Capture Size to 240 by 180 or smaller. Otherwise, set Capture Size to 320 by 240. After you've got a couple of movies under your belt, you can play with these settings and see how they impact movie quality and file size.



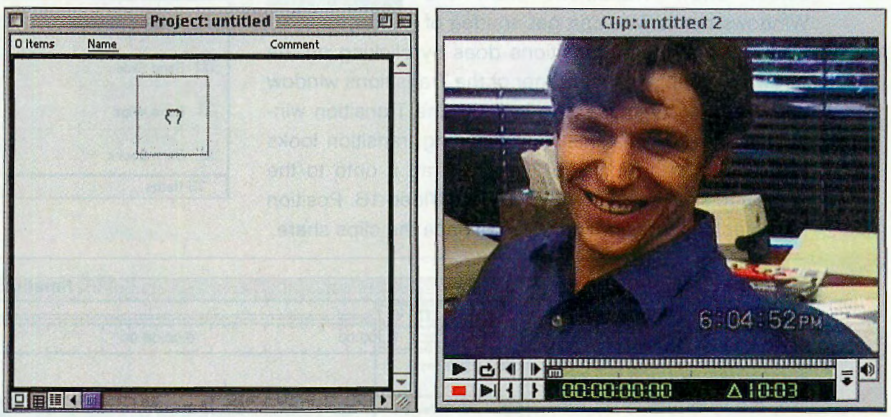
2 Adjust the Audio

Hook your camera up to the computer's video input (either the AV connector or through a PCI card) and audio input. In Premiere, go to Capture under the File menu and select Movie Capture. A small Movie Capture window appears with a blue screen and a Record button at the top. When you press the Play button on your camera, you will see the footage you recorded with the camera on this screen. While this is running, select Audio Input from the Movie Capture menu, then select Sound In as the Source. Adjust the gain and volume as needed.



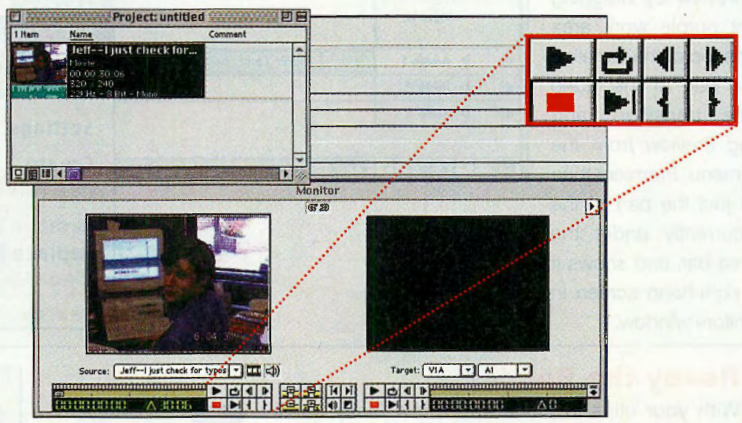
3 Capture the Clip

The Movie Capture screen should now be playing your tape, complete with sound. Press the Record tab at the top of the of the Movie Capture window to start Premiere recording. A larger window pops open, displaying the footage being captured. You won't be able to hear the audio as Premiere captures the footage, unless you select the option to leave the speaker on at all times from the Audio Input dialog box. Click your mouse to complete the capture, and a Clip window pops open with all the captured footage. Drag this clip to the Project window. This will prompt you to title and save the clip.



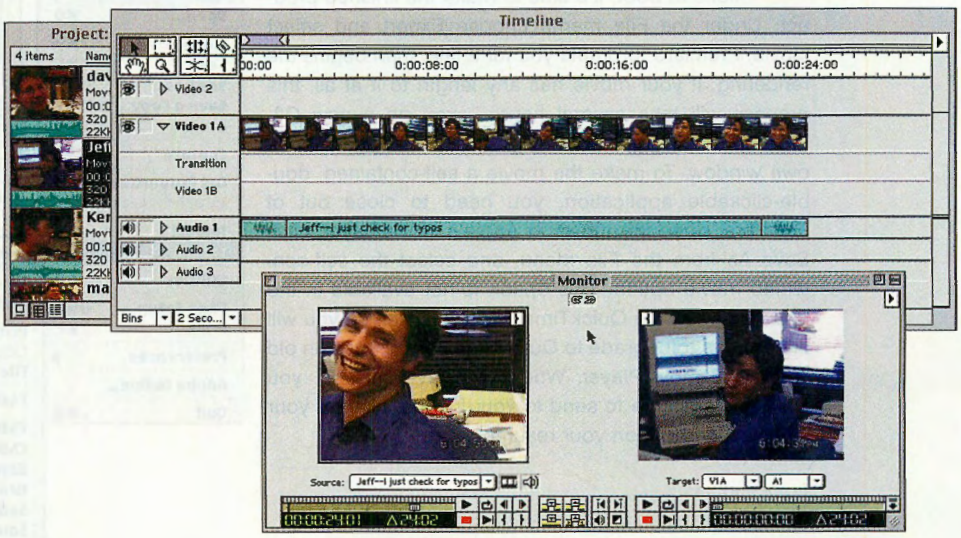
4 Snip the Segment

Repeat this process on any recordings that you wish to capture. Keep in mind that, at the current settings, each clip is a memory hog, and smaller hard disks fill up fast. Double-click on any clip in the Project window to load it into the Monitor window. (You can also drag the clip from the Project window to the left-hand screen in the Monitor window.) Once a clip is loaded into the Monitor window, you can precisely edit it to size by selecting start- and end-cut points with the controls below the screen (the last two controls on the bottom row). You can preview these edits by pressing the Play button immediately to the right of the Stop button.



5 Tile the Timeline

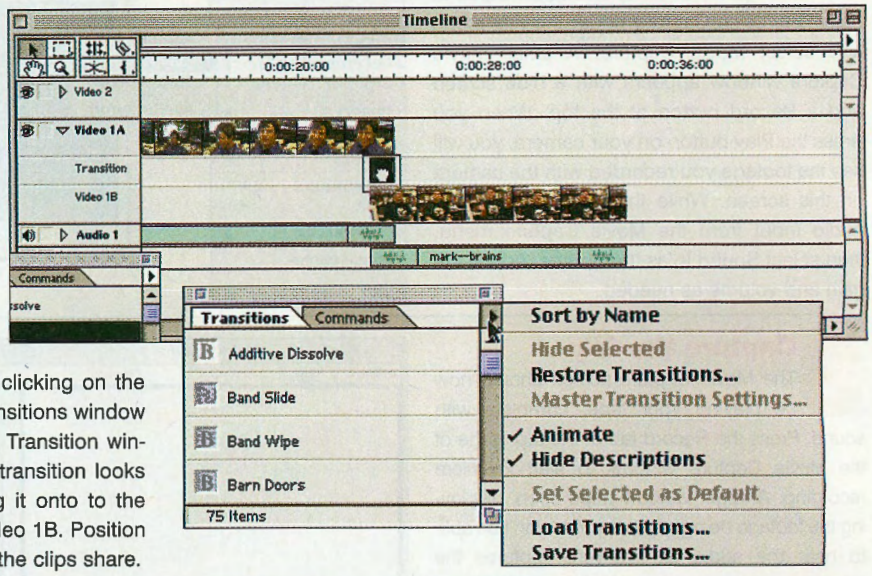
Select the clip with which you want to start your movie, and drag it from the Monitor window to the Timeline. A box equal in length to the time of the clip appears in the Timeline as you drag. Drop this first clip at the beginning of the Timeline in the Video 1A row. The audio file will appear in the corresponding Audio 1 row. Repeat this process with the clip you want to appear second, dropping it onto Video 1A immediately after the first clip—it should easily snap to fit. Continue this process until you have loaded all of your clips into the Timeline in the order you want them. If you want to preview the compiled clips, use the controls below the screen on the right side of the Monitor window to play the Timeline.



how to

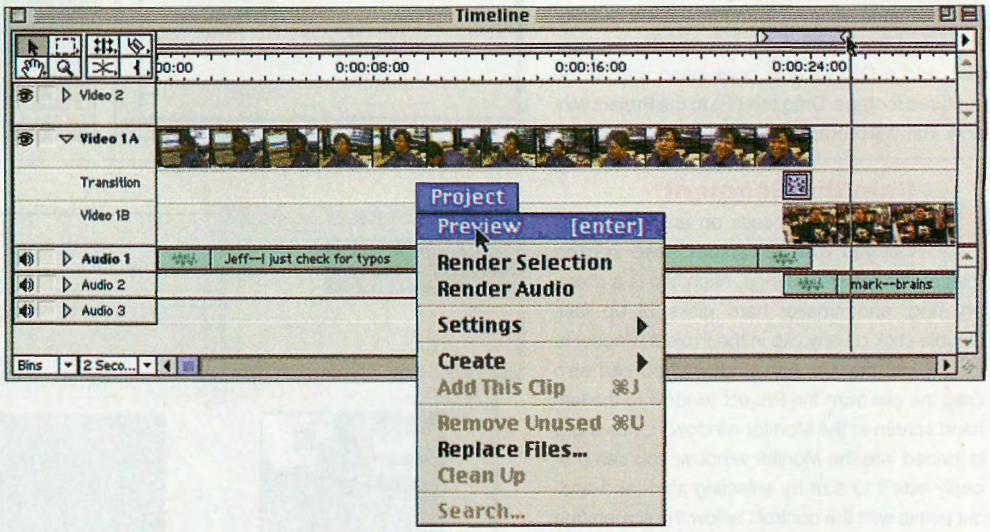
6 Track the Transition

To add a transition between video segments, put the clip to which the segment will transition on the Video 1B row in the Timeline (the audio automatically moves with it). Because the transition takes a second or two, you need to slide the clip over a little so it starts before the first clip finishes. To view Premiere's native transitions, select Show Transitions from the Windows menu. You can get an idea of what each of these transitions does by clicking on the arrow in the upper right corner of the Transitions window and selecting Animate. The icons in the Transition window will demo what the corresponding transition looks like. Find a transition you like and drag it onto to the Transition line between Video 1A and Video 1B. Position the selected transition in the time space the clips share.



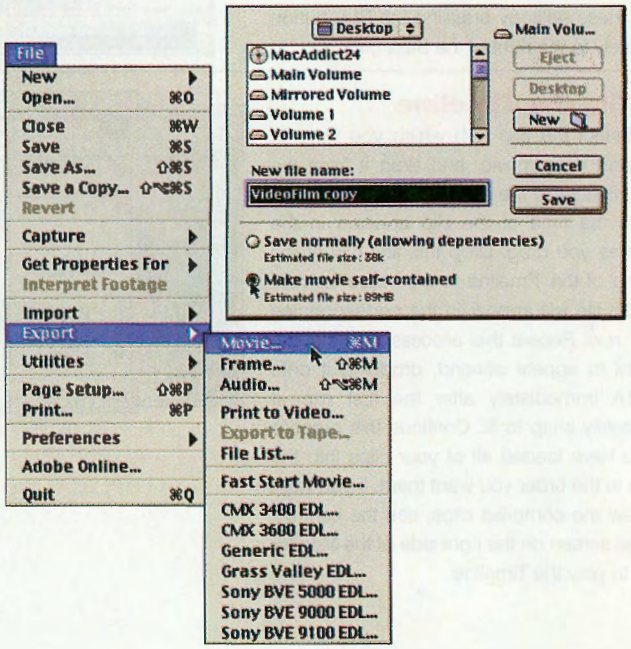
7 Preview the Project

For Premiere to show what your edit will look like, the video must be rendered. You can get a rendered preview by dragging the light purple work area bar at the top of the Timeline over the part of the video with the transition, and selecting Preview from the Project menu. Premiere then renders just the part of the video currently under the work area bar, and shows it on the right-hand screen in the Monitors window.



8 Ready the Render

With your clips in place and a few fancy transitions to boot, it's time to make the finished product. Under the File menu, choose Export and select Movie. Premiere prompts you for a title, then begins the rendering. If your movie has any length to it at all, this process will take several hours—even on a new G3. When rendering is complete, the movie appears in its own window. To make the movie a self-contained, double-clickable application, you need to close out of Premiere, open the movie in Apple's MoviePlayer, click Save As from the File menu, and select the self-contained movie option. This option is not available in the free version of the QuickTime 3 MoviePlayer, so you will either need to upgrade to QuickTime 3 Pro or use an old version of MoviePlayer. When you have finished, you have a minifeature to send to your friends, play for your relatives, and put on your resume.



All these hot sites are just a click away!

EveryMac

EveryMac tells you who makes what, with a specs-laden index of Macs and Mac-compatibles.

MacFixIt

MacFixIt brings you the latest news and tips on everything related to troubleshooting your Mac.

MacGamer's LEDGE

The MacGamer's Ledge offers comprehensive game reviews, daily Mac game industry news, weekly giveaways, exclusive reader deals, downloads and more.

deal-mac

Deal-mac finds hot offers on cool products, helping Mac shoppers stay informed and save money.

Evangelist is the official home of Guy Kawasaki's mailing list. Join the fight for the Mac!

MacAddict

MacAddict is a monthly magazine, CD-ROM, and Web site, updated daily for the Macintosh enthusiast.

VersionTracker online

VersionTracker reports the current versions of all your favorite Macintosh software, revised continually as updates roll in.

NoBeige.com brings you all the latest iMac news, message boards, a USB peripherals catalog, and a price and availability tracker.

MacResourcePage

Mac Resource Page provides timely news and reviews, special deals, bug reports, how-to primers, and the famed MRP RAMWatch pricing guide.

O'Grady's PowerPage is the ultimate resource for PowerBook users, with notebook news and mobility message boards.

As the Apple Turns follows the twists and turns of the Apple Computer saga in soap opera format.

INSIDE MAC GAMES

Inside Mac Games is a monthly CD-ROM magazine devoted to Mac games, with its own news-packed Web site.

Iconfactory presents quality freeware icons for your Mac from the masters of the iconic arts.

MacSurfer's Headline News gathers links to all —and we mean all— the latestMac news and views from all over the Web.

AppleJedi is the e-zine for evangelists, developers, solutions providers, and Defenders of the OS.

MacCentral offers the latest Mac news, software updates, editorials, and informative links.

MacAddict NETWORK

www.macaddictnetwork.com

about us

The MacAddict Network is the online source for Macintosh enthusiasts. Sixteen Mac-specific sites comprise the MacAddict Network making it the largest and most in-depth Macintosh site on the Internet. Affiliate sites have been selected based on the highest editorial standards and deliver the most passionate Mac buyers to advertisers everyday. From news to reviews, games to graphic, troubleshooting to Powerbooks, the MacAddict Network satisfies all the cravings of a Mac fanatic!

how to

Auto Upload with Applescript

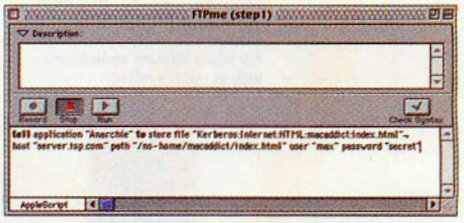
by Robert Capps and Mark Simmons

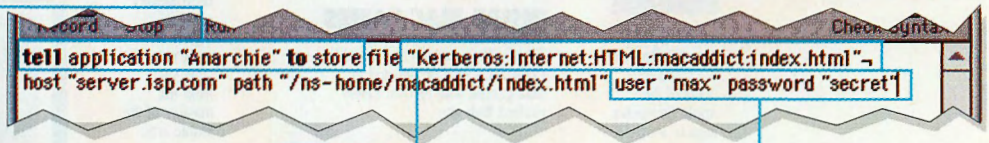
In any kind of production work, repetition runs rampant. Production on the Mac, be it graphics, sound, multimedia, or just plain old office management, is no exception. Take for example—and for the subject of this how-to—updating Web pages. Any HTML slinger worth his or her salt must keep his or her little slice of cyberspace fresh. We're talking constant updates. Sure, it's OK (even encouraged) to keep the overall layout of a site stagnant, but the stuff inside—that slimy, gooey substance known as content— must be flushed regularly or it's gonna stink up the place. This means FTP clients. This means daily shuffling of files. This means entering the same passwords, logging on to the same servers, opening the same folders, and making the same stupid, little, time-consuming mistakes every dang day. If you think these annoyances don't build up, maybe you haven't stopped to get a whiff of your site recently.

Or maybe you use AppleScript. We are, after all, Mac people. We have AppleScript. It's what separates us from the OS beasts. And while the difficulty of writing an AppleScript for the first time can make an otherwise-seasoned Mac veteran weep like a baby, once you get it written the repetition vanishes. Updating your site becomes as simple as dropping an HTML file onto a desktop icon. In this article we'll walk you through the building of just such a script. AppleScript is dense stuff. For an intro to AppleScript, you should check out "AppleScript Boot Camp" (May/98, p28). And to fully understand this how-to, it's probably best to fire up your Mac and do the steps as you read it. As always, everything you need—Stairways Shareware's Anarchie and the scripts themselves—is on The Disc. AppleScript itself comes with your computer if you have any system 7.1 or later. Just turn on the appropriate extensions (Apple Event Manager, AppleScriptLib, and/or AppleScript), fire up the Script Editor, and you're ready to fly.

1 The One-Liner

The essence of our task can be accomplished with a single line of AppleScript. In this case, we are using Stairways Shareware's Anarchie as our FTP client, which takes files from our hard drive and uploads them to a remote server. You can also use Jim Matthews's shareware program Fetch, or any other AppleScriptable FTP software. In order to tell Anarchie or any other FTP client what to do, you need to look up the program's AppleScript commands from its AppleScript dictionary. Accessing a program's dictionary merely requires selecting Open Dictionary from the File menu in the Script Editor and choosing the program. Anarchie's upload command is store.



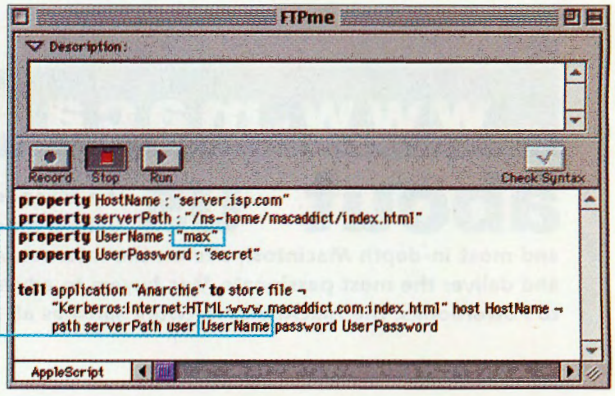


FIND ANARCHIE 2.0.1 and the scripts for this article on The Disc.

Basically, this script tells Anarchie to find the file index.html within the folder macaddict, which is located in the folder HTML in the folder Internet on the hard disk Kerberos (online editor Mark Simmons's pet name for his drive). Mac file paths—the route through a hierarchy of folders to a specific file—are separated by colons. For Unix machines, however, they are separated by slashes. Thus the path to the correct location on the site-hosting Unix server is /ns-home/macaddict/index.html, ns-home being where our macaddict directory is on the remote server server.isp.com. Of course, for access you must enter both a user name and password. We break up this long line by typing a ¬ character (Option-Return or Option-L), which tells AppleScript to keep reading instead of interpreting the line break as the end of a command. As written, this script can only be run by pressing the Play button within AppleScript, and in order to work on your machine, things such as file paths, the server name, your user name, and password must be changed to contain your specific information.

2 Properties and Organization

This second script accomplishes the same task, but cleans things up a bit. We also moved some chunks of unchanging, hard-coded data to the top of the script and gave them global names that can be quickly repeated throughout the script. We gave descriptive names to our remote host's name, our user name, our user password, and the path to the location for storing files on the remote server. For example, the user name *max*, which is required to log on to the remote server, is now referred to as *UserName*. Any time we type *UserName* into the script, AppleScript knows to substitute in the word *max*. But, you say, typing *UserName* isn't easier than typing *max*. Yes, but if you ever change your user name, password, or server information, you will only have to change it once at the top of the script.



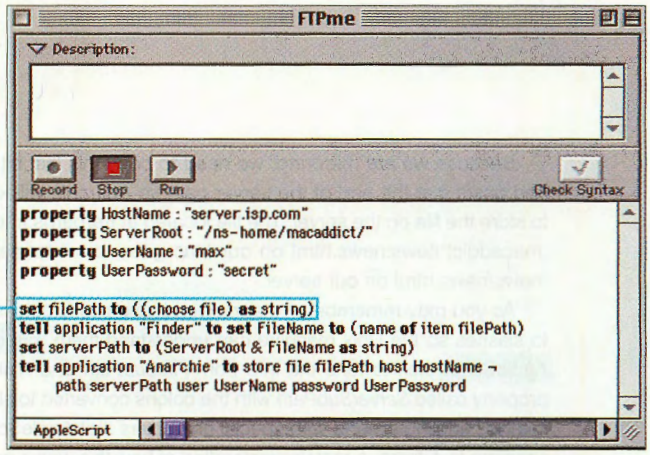
3 Variable Files

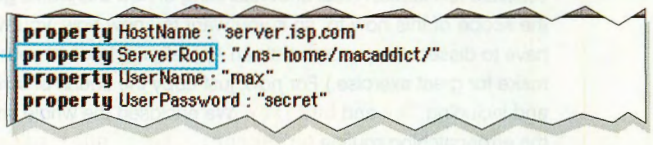
Our next addition to this script increases flexibility. The script in steps 1 and 2 will only upload a single hard-coded file. However, we want the script to upload any file we choose. Our AppleScript must be able to ask us to give it a file. We accomplish this with the line `set filePath to ((choose file) as string)`. The `(choose file)` portion of the script brings up a standard Open dialog box, and asks us to pick out the HTML file for uploading. The `set filePath to...as string` is an instruction for AppleScript to register which file we choose, record the path to that file, make a text string out of that information, and save the string as *filePath*. The path we typed out in the first step, Kerberos:Internet..., is the path to the file titled index.html on Mark's hard drive. When we run the script, it prompts us for the file we want uploaded, and figures the path out for itself.

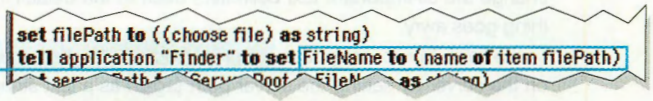
We want to make sure that when this file gets uploaded to the server, it's given the appropriate name. Notice that we have changed the server path property name at the top from *serverPath* to *ServerRoot*. We did this because we want to set only the path to the root directory—or topmost level—of our space on the server, so we can still have the actual name of the file—the very last part of the path—change. This will allow us to work with subdirectories later (equivalent to folders within folders on the Mac).

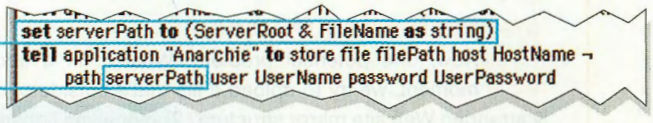
By now you've probably figured out what the `set` command does. It assigns a name to something. Notice that we have told the Finder to give the name *FileName* to a variable called `name of item` of our just-defined *FilePath*. Because figuring out file names with only AppleScript can get a little clunky, we have brought up the Finder's file name capabilities by prefacing the command with `tell application Finder`. This command tells the Finder to call up the path to the selected file and select what it knows as the name for that file—the name the finder displays to the user. Thus we have `set` the term *FileName* to the actual file name.

We next make a server path as we did a file path and give it the title *serverPath*. The *serverPath* consists of *ServerRoot*—the hard-coded path to the server directory where our site is kept—plus the *FileName*. With everything ready, we tell Anarchie to store *filePath* (the file we chose) to the remote server (*HostName*) in a defined place on that server (*serverPath*), and we give the server our name and password. When we run this AppleScript, it prompts us to pick a file, and then uploads that file—keeping the same name—to the top level of our Web space on our remote server.







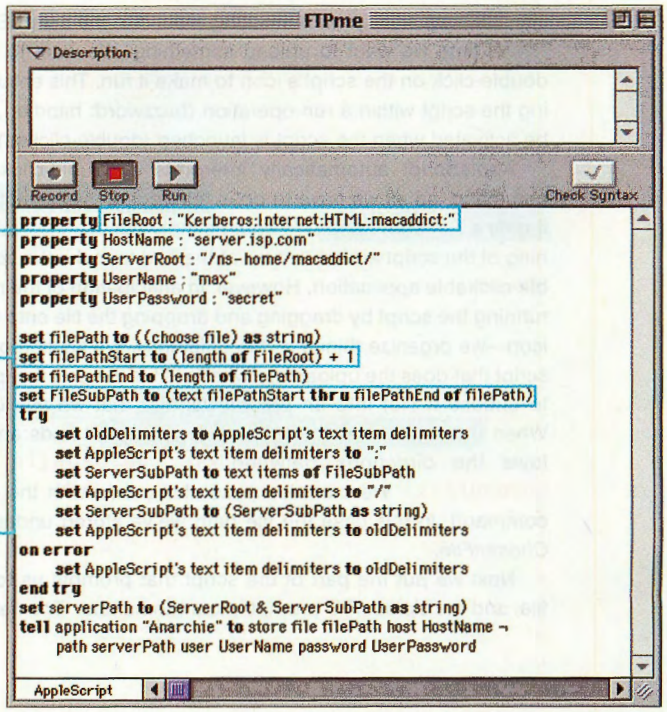


4 Multiple Page Sites

The script we have works great—if we keep our site on a single directory level. But to keep our site organized, we need subdirectories, such as www.macaddict.com/news. We begin addressing this need by setting up a mirror of our Web site's file hierarchy on our Mac's hard disk. A news folder within our macaddict folder corresponds to the news subdirectory of our server. We want our script to look at where we place a file on our mirrored Web folder, and place it in the corresponding place on the remote server. We start this process by creating the property *fileRoot* in our script and assigning it the path to the top-level folder. Notice it is the same file path as was hard coded into the first script in step 1, minus the file name index.html.

Because we made the path to the root level of both the Web server space and the mirrored Mac folder properties, we need to work only with the parts of the file paths that change. For example, of the path Kerberos:Internet:HTML:macaddict:index.html, we need only index.html.

To get just the end of the path we create the terms *filePathStart* and *filePathEnd*. The *filePathStart* begins at the first character following the *fileRoot* (Kerberos:Internet:HTML:macaddict:—33 characters), and the *pathEnd* equals the end of the *filePath*. We then have AppleScript define *FileSubPath* as just the section between *filePathStart* and *filePathEnd*. In the case of the index.html file, the snip is just the file name, but this same structure can separate paths to folders and files deeper within the folder macaddict. For example, if we have a folder called macaddict on our Mac, and in that folder we have another folder called news, and in that folder we have an HTML file called news.html, then the snipped *FileSubPath* would be news:news.html.



Because we are mirroring, we need to copy this last bit of file path and paste it at the end of the server path so Anarchie will know where to store the file on the server. The file located at Kerberos:Internet:HTML :macaddict:news:news.html on our Mac goes to /ns-home/macaddict /news/news.html on our server.

As you may remember, we also need those pesky colons converted to slashes so the Unix machine can understand them. We use a weird AppleScript trick to take the info from *FileSubPath* and make it a new property called *ServerSubPath* with the colons converted to slashes. This involves fiddling around with special characters that AppleScript uses to separate text items. A real understanding of how this works goes beyond the scope of this how-to, so if you want to know how, you will probably have to dissect the process with an AppleScript book at your side. (It will make for great exercise.) For now, just copy the chunk of script between and including `Try` and `End Try`. We enclosed the whole shebang with the error-catching routine `on error...to oldDelimiters` that will change the all-important text delimiters back to the default in case anything goes awry.

```
try
    set oldDelimiters to AppleScript's text item delimiters
    set AppleScript's text item delimiters to ":"
    set ServerSubPath to text items of FileSubPath
    set AppleScript's text item delimiters to "/"
    set ServerSubPath to (ServerSubPath as string)
    set AppleScript's text item delimiters to oldDelimiters
on error
    set AppleScript's text item delimiters to oldDelimiters
end try
```

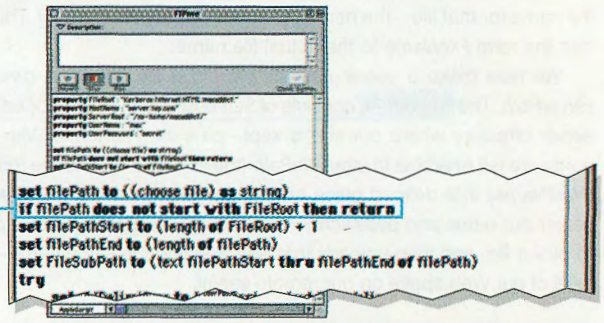
To finish the script update, we give directions for placement of the file on the server by setting the server path (again as a text string), combining the predefined *ServerRoot* and the newly created *ServerSubPath*. We then tell Anarchie to upload the file *filePath* (which prompts everything to happen) to the host at *serverPath*. When we press the Run button in the Script Editor, it prompts us for a file, and then copies that file to the corresponding place on the remote server. Neato...

```
set serverPath to (ServerRoot & ServerSubPath as string)
tell application "Anarchie" to store file filePath host HostName ¬
    path serverPath user UserName password UserPassword
```

AppleScript

5 Protecting Ourselves

Now, one potential problem: What if, in a addle-brained moment, we try to upload a file that's outside of our carefully arranged Web site mirror structure? The one-line if-then command `if filePath...then return` checks that the selected file lies within our root folder, and if not, it exits the script with a Return command.

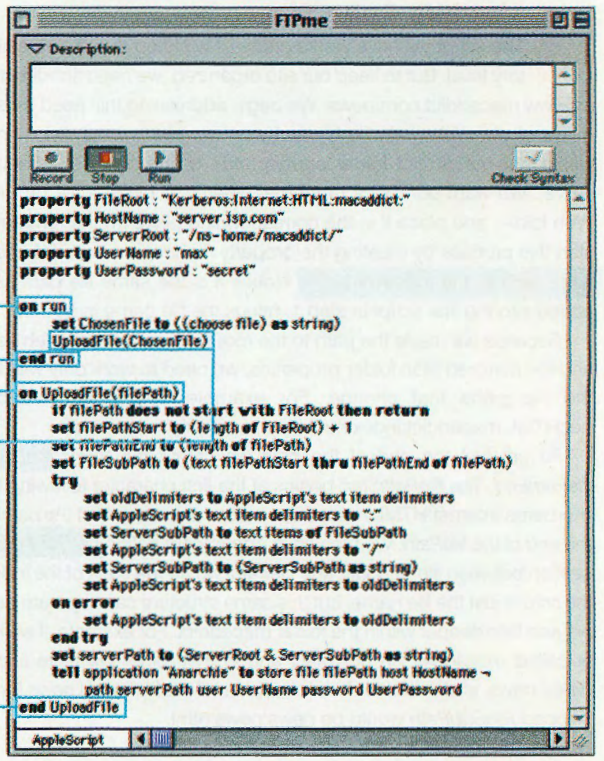


6 Double-Clickable Script

Okay, enough with mucking around in the Script Editor every time we want to upload something. We want to be able to double-click on the script's icon to make it run. This entails packaging the script within a run operation (buzzword: handler), which will be activated when the script is launched (double-clicked).

AppleScript automatically interprets a double-click as a run command, so all we have to do is tell AppleScript what to do when it gets a run command. We could simply put `on run` at the beginning of the script and `end run` at the end to make the script a double-clickable application. However, in anticipation of the next step—running the script by dragging and dropping the file onto the script's icon—we organize things a little differently. We section off all of the script that does the uploading (what's left is the part that prompts us to choose a file) into an upload handler that we title *UploadFile*. When the script sees the *UploadFile* prompt, it finds and then follows the directions between `on UploadFile` and `end UploadFile`. We can also pass along data with the *UploadFile* command, in this case the file path we've stored under the name *ChosenFile*.

Next we put the part of the script that prompts us to choose a file, and the *UploadFile* prompt into a run handler. The name we use



n the run handler doesn't have to match the ame we used when we invoked the command. To illustrate this principle, we've used he name *filePath* to refer to the file path data ve've passed along to the *UploadFile* handler.

To finish, we save the script as an application nder Save As from the File menu. All we have to lo is double-click on the script's icon and it prompts us to pick a file, then uploads it.

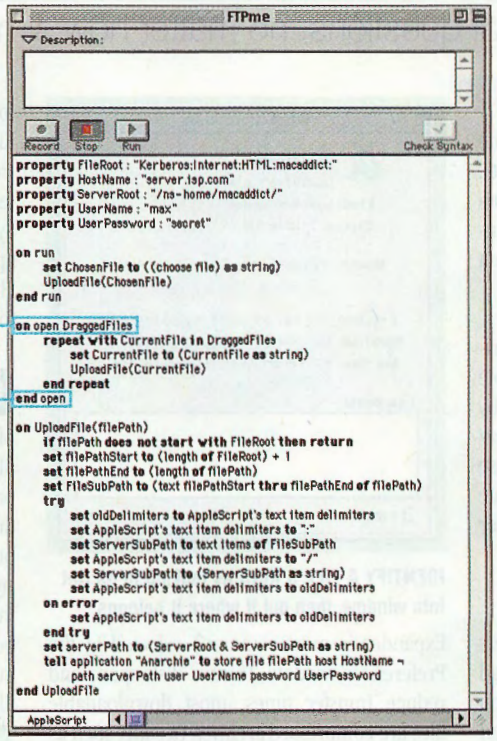
```
on run
    set ChosenFile to ((choose file) as string)
    UploadFile(ChosenFile)
end run

on UploadFile(filePath)
    if filePath does not start with FileRoot then return
    set filePathStart to (length of FileRoot) + 1
```

7 Drag and Drop

For the final touch, we turn this bad boy (or girl, or...thing) into a full-blown drag-and-drop application. This will enable us to upload a whole bunch of files at once by dropping them, en masse, onto the script icon. To do this, we need to give it an open handler.

You can find the open handler right below he run handler in our script. The sections of the script—the run handler, the upload handler, and he open handler—can appear in any order (we ust like this one). We include both the run handler and the open handler, which gives us the choice of either dragging files onto the script, or double-clicking on the script so that it prompts us for a file. If we drag files onto the script, only he open handler gets used. If we double-click the script and select a file, only the run handler gets used.

When you drag files onto any drag-and-drop script, AppleScript receives an open command and a list of file paths to the dragged-on files. We ell our script what to do when it receives an open command with the phrase `on open...` As before, any word we put after `open` becomes the name of the data in question—in this case the list of files. We name our list *DraggedFiles*. The command `repeat with CurrentFile in DraggedFiles` tells AppleScript to go through each item of the *DraggedFiles* list in turn. When a file path's turn comes up, the script gives the file path the name *CurrentFile* and performs the actions in the repeat loop. In this loop, we tell the script to turn *CurrentFile* into a text string and retain the name *CurrentFile*. We also put the *UploadFile* command in, which starts the upload handler on the current *CurrentFile*. The script systematically runs through each file that was dragged on top of it, and uploads that file.

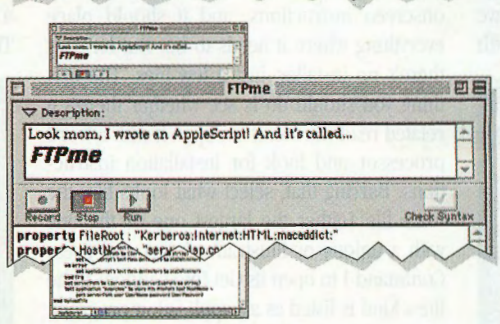


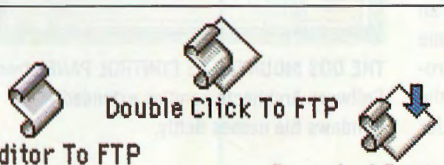

```
on open DraggedFiles
    repeat with CurrentFile in DraggedFiles
        set CurrentFile to (CurrentFile as string)
        UploadFile(CurrentFile)
    end repeat
end open
```

```
    repeat with CurrentFile in DraggedFiles
        set CurrentFile to (CurrentFile as string)
        UploadFile(CurrentFile)
    end repeat
end
```

8 Liner Notes

Our script is now ready for prime time, so we throw some vanity comments in the Description field. Ooh! Aah! Styled text. If you update your Web site daily, this AppleScript will save you scores of minutes a day, and even better, prevent constant errors.





AN APPLESCRIPT'S ICON CHANGES to reflect what kind of script it is. The script at left must be run from within the Script Editor, the center script is a double-clickable application, and the script at right we can drop files onto.

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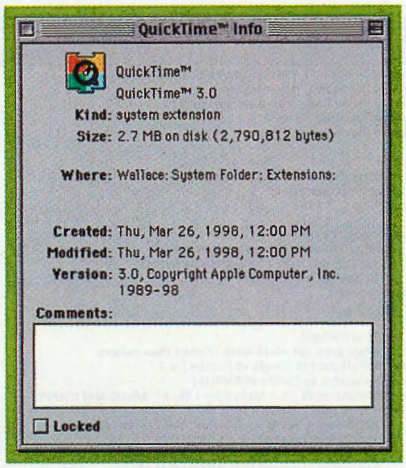
FIND POPCHAR PRO and a demo of DOS Mounter 95 on The Disc.

Q As a designer, I'm particularly fond of the font Apple uses in its print advertisements. What is the name of this font? Is this a proprietary font that Apple owns and uses exclusively? Is it possible to buy it or a similar font from another vendor?

A According to Apple's copyright department, the font you want is called Apple Garamond. It was developed for Apple by International Typeface Corporation (http://www.itcfonts.com) and is not available for use outside Apple. However, you can approximate the look by using tight tracking with any other version of Garamond.

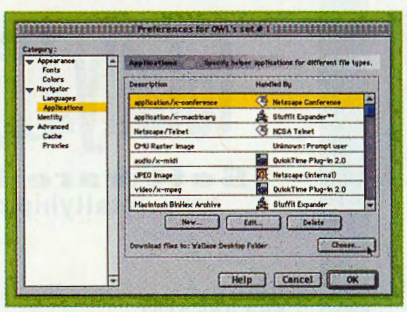
Q As someone new to Macs and computers in general, I have a question. When you load software into your computer, how do you know where to put it? If I download QuickTime 3, does it go in the Extensions folder or in the Control Panels folder? What about audio players? The instructions never seem to specify where the item you are installing should go, and as someone who is still learning, I'm confused.

A Since you're an admitted newbie, let's start from the beginning. When your browser has finished downloading the file, it may or may not automatically decode and decompress the file, depending on whether you have the appropriate helper application (StuffIt Expander is most common) selected in the Preferences window. To save disk space and reduce transfer times, most downloadable files are compressed archives (a suffix such as .sit, .sea, .tar, or something similar indicates this); you must decompress them before you can use them on your Mac. If the helper application is properly configured, it decodes, decompresses, and then deletes the downloaded archive, leaving an honest-to-goodness Mac file or folder in its place.



IDENTIFY A FILE'S KIND by looking in its Get Info window, then put it where it belongs.

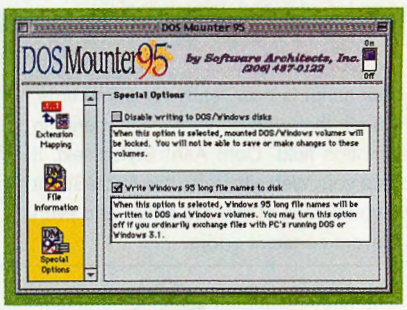
Now we get to the root of your question. If you are in luck, the download includes an installer. In that case, all you need to do is double-click the installer and follow the onscreen instructions, and it should place everything where it needs to be. But let's say there's no installer, just a few files. The first thing you should do is see whether there's a related read-me file. If so, open it with a word processor and look for installation instructions. Barring that, select what looks like the main file (either the largest one or the one with a unique or illustrative icon) and press Command-I to open its Get Info window. If the file's Kind is listed as an application program, it's a double-clickable application that you can store anywhere on your hard drive (some control panels are listed as application programs, but you should keep them in the Control Panels folder inside the System Folder for convenience's sake). However, if the file's Kind is listed as contextual menu plug-in, control panel, control strip module, font, or system extension, you should drag it onto the System Folder and let the Finder put it in the appropriate subfolder. Usually you have to choose Restart from the Finder's Special menu to activate items placed in the System Folder.



WHERE FILES END UP depends on the download location your browser or email program specifies.

Q I have a client using Windows 95, and he often sends me disks containing files with long file names. With Apple's PC Exchange control panel (part of Mac OS 8.1), I can mount these disks on my Mac and open the files just fine, but the file names are shortened to the old-style DOS convention—eight characters with a three-character suffix (WebSiteDirectory.htm becomes WEBSIT~1.HTM). I was under the impression that Mac OS 8.1 could handle long file names. What's going on?

A Windows 95 indeed lets you name files with more than 11 characters, but the file maintains a hidden 8+3 name so that it is backward-compatible with DOS. The current version of PC Exchange does not recognize Windows 95 extended file names, and instead displays the same name you would see if you inserted the disk in a DOS-based computer. If this is unacceptable for your needs, you may want to invest in a copy of DOS Mounter 95 from Software Architects (800-863-9297 or 425-487-0122, http://www.softarch.com). This program allows you to mount DOS and



THE DOS MOUNTER 95 CONTROL PANEL from Software Architects handles extended Windows file names deftly.

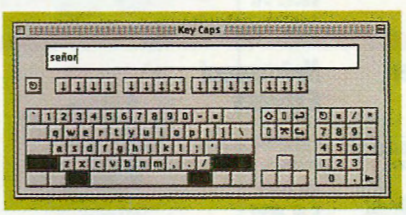
Slow Word Scrolling Tip

Reader Erik Ladinsky writes in with a great tip. "Upgrading to Mac OS 8.x causes Microsoft Word 5.1 documents with equations or other embedded objects to display and scroll very slowly, even on powerful Mac models such as the G3. The solution is to open the Appearance control panel, click Options, then deselect the System-Wide Platinum Appearance check box. Once you've done this, Word documents with embedded objects scroll as fast as before."

Windows disks on the Mac desktop, and it comes set to open the most common types of DOS programs with the appropriate Mac applications. DOS Mounter 95 truncates extended Windows 95 file names only if they exceed the Mac's limit of 31 characters. It supports high-density floppies; Bernoulli, Jaz, SyQuest, and Zip cartridges; and rewritable optical media such as magneto-optical, PD, and phase-change. To see if Mounter 95 fits your needs, get a time-limited demo from The Disc, or download the demo from the Software Architects Web site.

Q Where can I get the Spanish version of the Mac OS? I need to convert my Spanish-speaking dad to the Mac, and this will really help. He lives in the United States, so we can't exactly buy one at the corner computer store.

A Apple makes a big deal of the fact that the Mac OS is an international operating system (http://www.apple.com/macos/multilingual), and is available in 35 localized versions around the world, including Spanish. These localized versions of the OS display all menus and dialog boxes in the appropriate language and follow the cultural conventions of the native country for things such as date format.



DISCOVER DIACRITIC MARKS using the Key Caps feature of the Mac OS.

For languages that don't use the characters found in the Roman alphabet, Apple sells Language Kits with input methods and fonts allowing you to incorporate multiple languages into documents and view foreign-language Web sites properly. For any language that uses the Roman alphabet, you don't need a kit because you can create diacritic marks (various accents plus the cedilla, circumflex, tilde, and so forth) by pressing the appropriate key combination. You can use Apple's Key Caps to figure out how to create other such characters, or try Guenther Blaschek's more full-featured PopChar Pro shareware control panel (http://www.unisoft.co.at/products/popchar.html).

Now for the real question: Unfortunately, the Apple Software Order Center doesn't sell any of the localized versions of the Mac OS here in the United States—inexplicably, it sells and supports localized versions only in foreign countries. So if you want to buy the Mac OS localized for Spanish, you need to contact a Spanish-speaking division of Apple, such as Apple Computer Mexico (http://www.apple.com.mx). It's a hassle, but if it helps you convert your father to the Mac cause, it's worth it.

Q I just downloaded the Conflict Catcher 4.1.1 update from your site. What's the advantage of BinHex over MacBinary that warrants the extra time to download the larger BinHex format?

A Whenever you get a choice of different versions of the same file on the Internet, always try downloading the smaller file first because it takes less time. BinHex (indicated by the suffix .hqx) and MacBinary (.bin) are two of the more popular encoding schemes that facilitate transmission of Mac files over a wide range of computers using various programs. A file encoded in the MacBinary format can be up to 30 percent smaller than the same file in BinHex format, which is essentially just plain ASCII text. If you have a reasonably current browser, email program, or FTP client, you should have no problem downloading the smaller MacBinary files. Only if your program chokes when you attempt a download should you bother resorting to the larger, more easily compatible BinHex version of the same file. After you download either type of file, it must be decoded (usually the program that downloaded the file handles this automatically), and may need decompression before you can use it. StuffIt Expander both decompresses and decodes files.

Owen W. Linzmayer (askus@macaddict.com, http://www.netcom.com/~owenink) is a San Francisco–based freelance writer and the author of *The Mac Bathroom Reader*. Please submit technical questions or helpful tips directly via email or care of *MacAddict*, 150 North Hill Dr., Suite 40, Brisbane, CA 94005.

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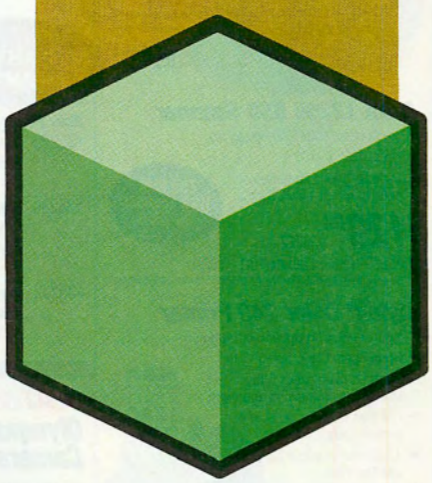

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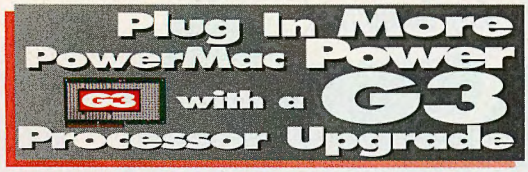

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Sonnet G3 Upgrades For the PowerMac 7300/7500/7600/8500/8515/8600/9500/9515/9600; Workgroup Server 7350, 8550, 9650; Power Computing PowerWave; UMAX J700 & S900; and DayStar Genesis 538.

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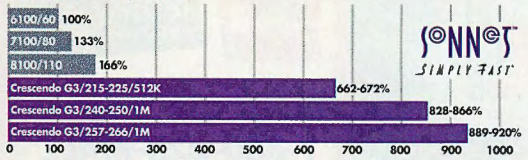

Sonnet Crescendo G3 Upgrades
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1Mb L2 73/75/76/85/86 & Compatible Clones	$119
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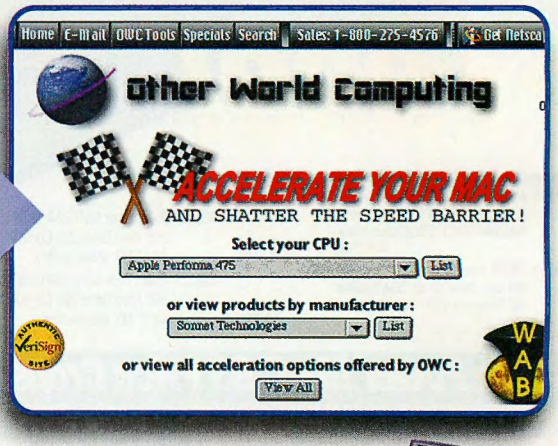

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4.5gb Cheetah ST34501N 8ms 10,000rpm 1024k Cache 5yr	$369	$439
4.5gb Barracuda ST34573N 9LP 7.1ms 7200rpm 1024k Cache 5yr	$519	$569
6.5gb Medalist Pro ST36530N 9.5ms 7200rpm 512k Cache 3yr	$429	$479
9.1gb Medalist Pro ST39140N 9.5ms 7200rpm 512k Cache 3yr	$569	$619
9.1gb Barracuda ST39173N 9LP 7.1ms 7200rpm 1024k Cache 3yr	$679	$729
18gb Barracuda ST118273N 9LP 7.1ms 7200rpm 1024k Cache 5yr	$1,229	$1,289

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5v 168 PIN DIMMS 2K Refresh 60ns for Apple 5400/6360/6400/7200/7300/7500/7600/8500/9500 & Compatible PowerComputing & Umax Computers.
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Iomega Jaz 1GIG SCSI With 1 Cartridge	$229	$299
Iomega Jaz 2GIG SCSI With 1 Cartridge	-	$359

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Yamaha CDRW4260
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$159 Internal

- Eclipse IDE
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PBook 3400/G3	96 MB	$199
PBook 3400/G3	128 MB	$229

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Duo 280/2300	36 MB	$139
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Quantum Atlas & Viking drives carry a 5 Year Warranty

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3.2GB	Stratus SE	QM33240SES	10ms	5400	$239	$309
4.3GB	Stratus SE	QM34320SES	10ms	5400	$279	$349
6.4GB	Stratus SE	QM36480SES	10ms	5400	$359	$429
8.4GB	Stratus SE	QM38420SES	10ms	5400	$479	$549
9.1GB	Atlas III	QM309100TDS	7.8ms	7200	$729	$799
18.2GB	Atlas III	QM318200TDS	7.8ms	7200	$1249	$1319
UltraWide SCSI-3						
4.5GB	Viking*	QM34550VKSC	8ms	7200	$199	$289
9.1GB	Atlas III	QM309100TDLW	7.8ms	7200	$779	$869
18.2GB	Atlas III	QM318200TDLW	7.8ms	7200	$1359	$1449
IDE Drives						
2.5GB	Fireball EL	QM302500ELA	10ms	5400	$139	----
5.1GB	Fireball EL	QM305100ELA	10ms	5400	$169	----
7.6GB	Fireball EL	QM307500ELA	10ms	5400	$259	----
10.2GB	Fireball EL	QM310200ELA	10ms	5400	$339	----

*80 pin SCA drive with 68 pin adapter

Seagate

Barracuda & Cheetah drives carry a 5 Year Warranty
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6.5GB	Medalist Pro	ST36530N	9.5ms	7200	$399	$469
4.5GB	Medalist Pro	ST39140N	9.5ms	7200	$529	$599
9.1GB	Barracuda 9LP	ST39173N	7.1ms	7200	$649	$719
9.1GB	Cheetah	ST19101N	7.7ms	10000	$799	$869
18.2GB	Barracuda 18	ST118273N	7.1ms	7200	$1199	$1269
UltraWide SCSI-3						
9.1GB	Barracuda 9LP	ST39173W	7.1ms	7200	$649	$739
9.1GB	Cheetah 9LP	ST39102LW	12.2ms	10000	$799	$889
18.2GB	Barracuda 18	ST118273W	7.1ms	7200	$1199	$1289
18.2GB	Cheetah 18	ST118202LW	12.2ms	10000	$1429	$1519

IBM

IBM drives carry a 5 Year Warranty

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9.1GB	UltraStar 9ES	00K3990	7.5ms	7200	$599	$689
9.1GB	UltraStar 9ZX	59H6590	6.5ms	1000	$639	$729
18.2GB	UltraStar 18XP	59H6591	6.5ms	7200	$1199	$1289

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iMac

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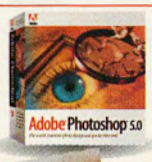

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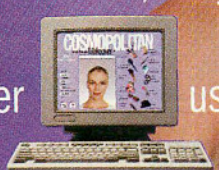
Changing your look is fun, easy and risk free! Simply load your picture into the computer  using a regular camera, scanner or digital camera.

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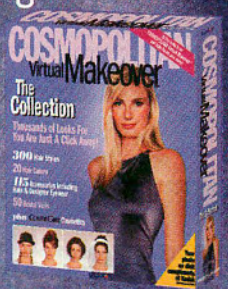

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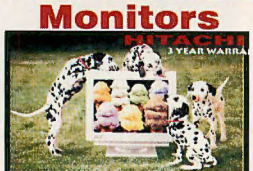

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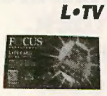

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Syjet 1.5GB (DUOSYJETM) $350

• SCSI HARD DRIVES •

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4550MB	7200rpm	512K	ST34573N	5yr	$485	$545
6530MB	7200rpm	512K	ST36530N	3yr	$375	$435
9140MB	7200rpm	512K	ST39140N	3yr	$495	$555
9190MB	7200rpm	1024K	ST39173N	5yr	$605	$665
18200MB	7200rpm	1024K	ST118273N	5yr	$1120	$1180
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4520MB	7200rpm	512K	ST34520W	3yr	$270	$360
4550MB	7200rpm	512K	ST34573W	5yr	$480	$570
6530MB	7200rpm	512K	ST36530W	3yr	$375	$465
9140MB	7200rpm	512K	ST39140W	3yr	$495	$585
9190MB	7200rpm	1024K	ST39173W	5yr	$605	$695
18200MB	7200rpm	1024K	ST118273W	5yr	$1120	$1210
ULTRA 2 SCSI						
4550MB	7200rpm	1024K	ST34573LW	5yr	$495	$605
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18200MB	7200rpm	1024K	ST118273LW	5yr	$1125	$1235
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IBM

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9100MB	7200rpm	512K	IBM39130N	5yr	$525	$585
18200MB	7200rpm	1MB	IDGHS18Z	5yr	$1099	$1159
ULTRA WIDE SCSI						
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9100MB	7200rpm	512K	IBM39130W	5yr	$539	$629
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18200MB	7200rpm	1MB	IDGHS18U	5yr	$1099	$1189
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9100MB	7200rpm	512K	M3091W	5yr	$499	$589
9100MB	10,000rpm	512K	M3091WP	5yr	$659	$749
18200MB	7200rpm	512K	M3182SW	5yr	$1029	$1119

• CD ROM DRIVES •

			Internal	External
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32X - Slot load	Pioneer	DRX32SM/XM	$90	$150
32X - Tray load	Toshiba	XM6201BM/XM	$105	$165
32X - 512K buffer	Plextor	PX32TSM/XM	$148	$208
36X - Slot load	Pioneer	DRU706M/XM	$95	$155

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Complete kit for Mac G3 computers	DVDMAC	**$399**
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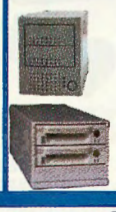

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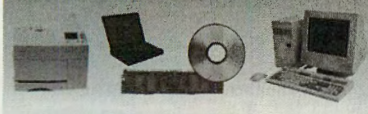

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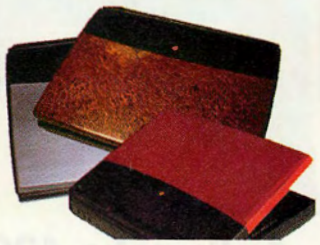

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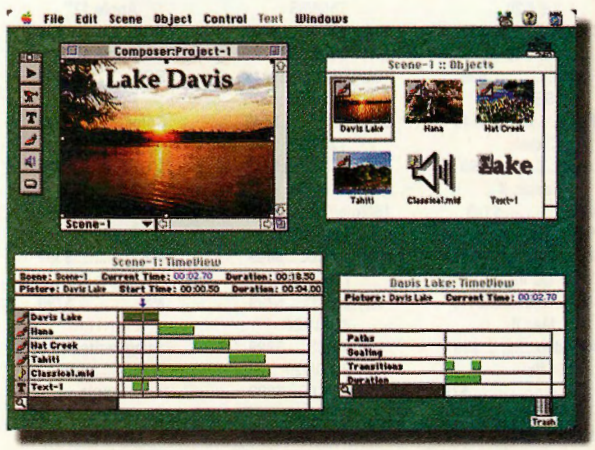

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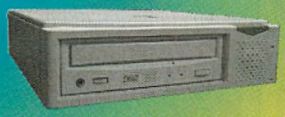

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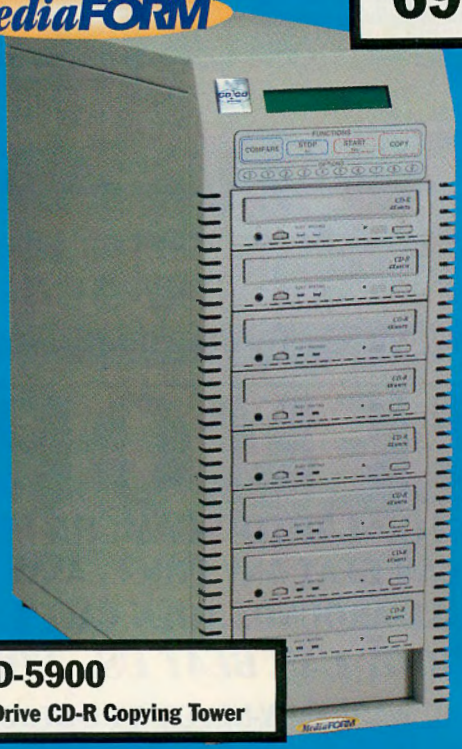

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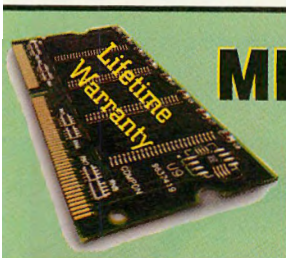

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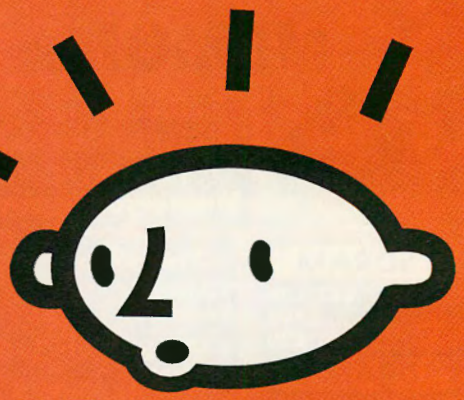

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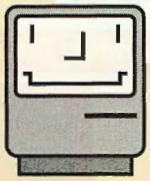

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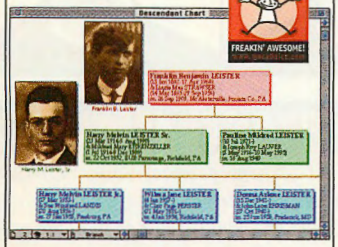

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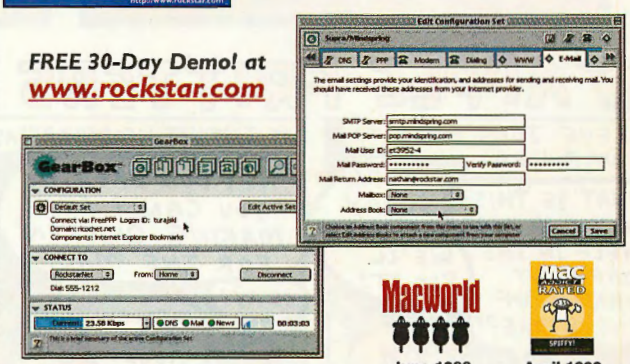

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Deep Thoughts

"I predict that Steve will one day conquer Hollywood as dramatically as he conquered Silicon Valley. Michael Eisner, watch out; Steve Jobs now has a new talent on his resume: displacing the CEO. The Walt Disney Company could be next."
—Excerpted from *On the Firing Line: My 500 Days at Apple*, by Gil Amelio and William L. Simon

Et Tu, Umax?

"Therefore, Apple would need to make future OS releases incompatible with many of their own systems in order for them to be incompatible with the SuperMac systems. We think this is unlikely, but admittedly, with Apple, anything is possible," states a Umax support page (http://www.online1.supermac.com/cgi-bin/kbdisplayrecord/KB00343) detailing the probability of the occurrence of the seven signs of the second coming of Christ. Thanks be to reader Eric Harvieux for pointing our browsers in this direction.

The Truth Is Out There

As we rush to print, Silicon Valley bigwigs are being called in to testify for and against Microsoft in the biggest antitrust case to rock Washington in years. Truth is sounding stranger than fiction as key witnesses wheel and deal behind a veil of confidentiality that has hitherto prevented the press from recording their shocking statements—until now, that is. Here's what you haven't heard:

"I will bribe, I mean bet, any person in this courtroom that Microsoft is not a monopoly," said Microsoft founder Bill Gates during an intense Q&A session. "What's your price...I mean, what do you want to bet?"

"Internet Explorer is my browser of choice," Apple Computer's interim CEO Steve Jobs repeatedly droned for no apparent reason throughout the trial.

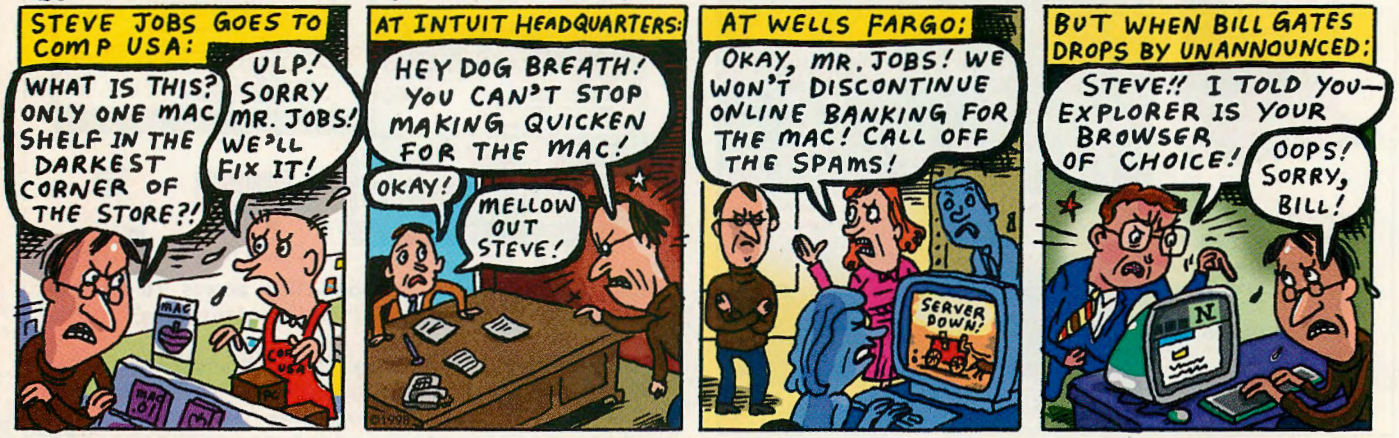
"I did not have sex with Bill Gates, nor did I coerce him into lying under oath to protect my faltering political career," said President Bill Clinton in what many believe to have been a knee-jerk response that the courtroom surroundings triggered.

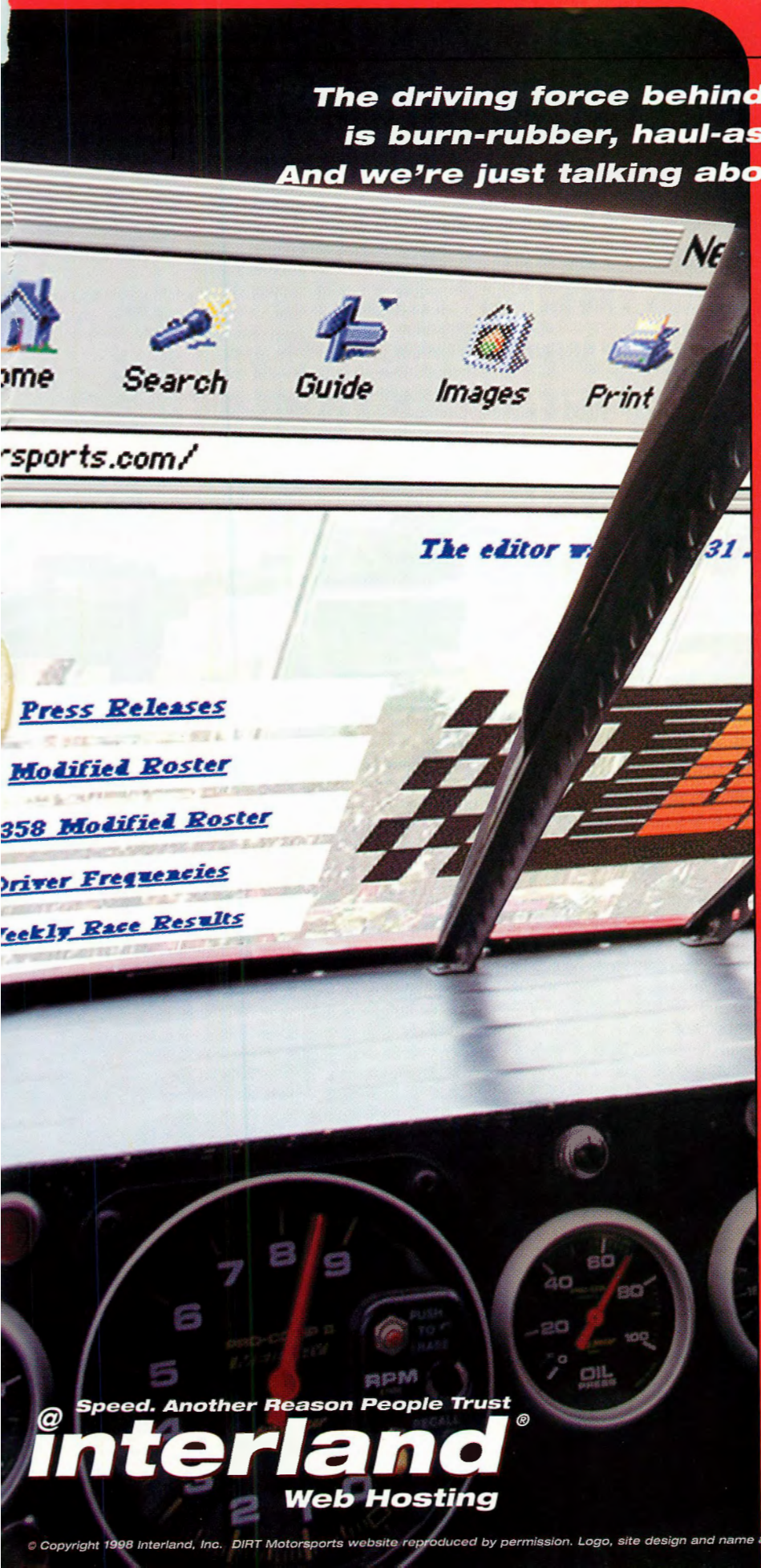
"I do not look like Bill Gates," clarified Attorney General Janet Reno. "He looks like *me*."

"If nobody tells the Department of Justice, then nothing happened," said Gates in an off-the-record comment to Netscape founder Marc Andreeson, minutes before a mysterious $50 million deposit showed up in an offshore account held under the name Arc Mandreeson.

Apple Fritters

By Lloyd Dangle





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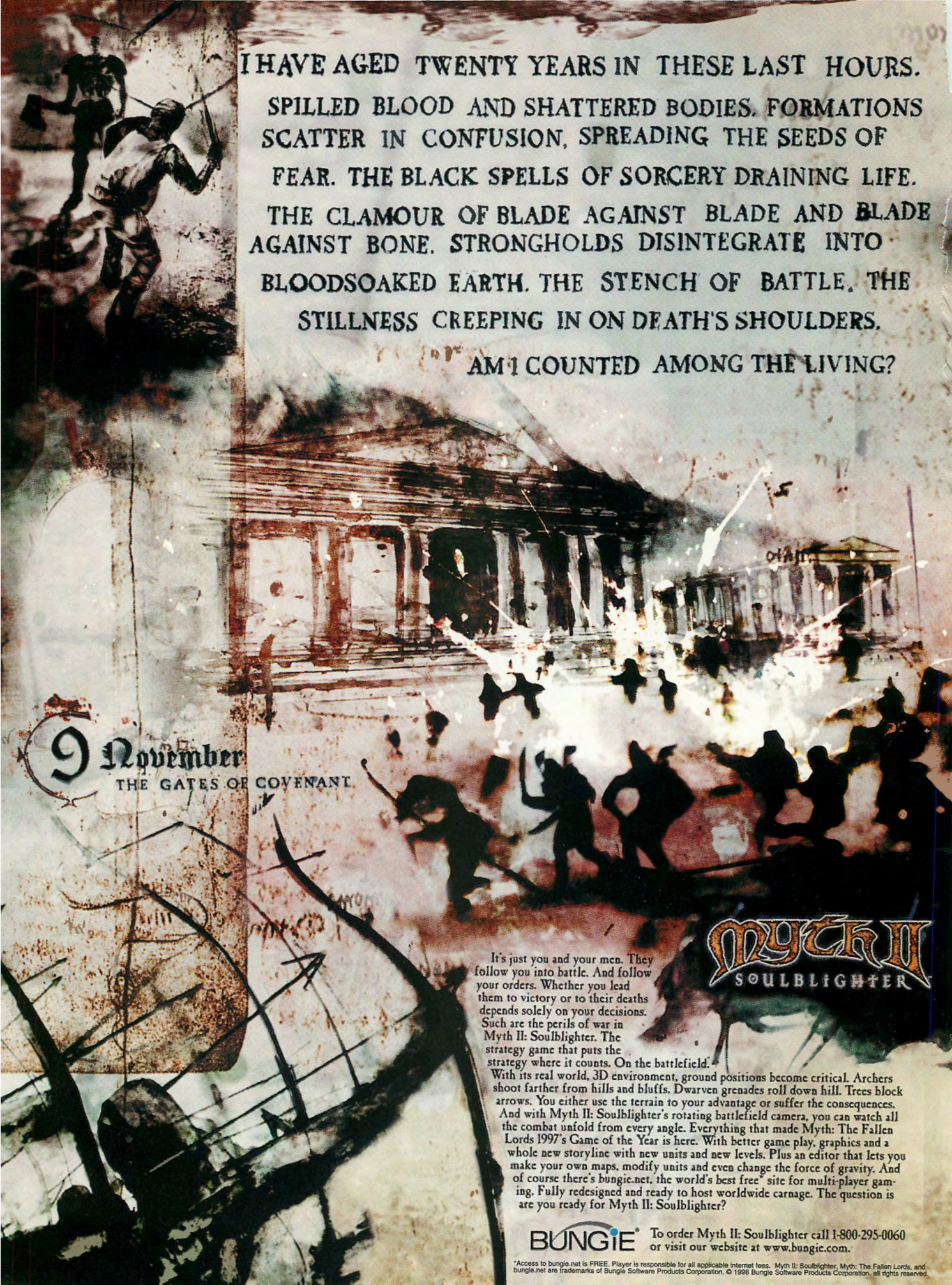
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